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EDUCATION IN ANCIENT BABYLONIA, PHCENICIA AND JUDEA.

NO part of the globe has more ancient and more memorable records than the strip of Asia that stretches from the Ægean Sea to the Gulf of Persia. None has so profoundly influenced the fortunes of mankind. Here, Scripture tells us, was the home of Noah's family after the Flood; here, the great city of Babel, memorable for the confusion of tongues, whence Noah's descendants scattered to people the earth. Here was the country of the daring Phœnician seafarers, who roamed from land to land past the straits of Gibraltar to the coast of Cornwall, bringing commerce and carrying civilization. Here was the land promised to Abraham and his seed, which the Son of God chose for his abode on earth, and from which went forth Christ's kingdom conquering and to conquer. Surely the scene of events so pregnant with man's weal and woe has powerful claims to our interest. For centuries before the advent of Christianity the culture and civilization of Western Asia influenced the culture and civilization of the most progressive nations of Europe, and even to-day our daily life is profoundly influenced by the races that dwelt in far remote ages between the Tigris and the Ægean. If, then, there be a vital connection between a people's civilization and its education, the learning and schools of the Babylonians, the Assyrians, the Hebrews, and the Phœnicians must powerfully interest the serious student of history and philosophy.

Let us first turn our footsteps to the valley of the rivers Tigris and Euphrates. Here lay the great cities of Babylon and Ninive; here were Ur of the Chaldees, whence God called Abraham to the

land of Canaan, and Harran, where the patriarch dwelt on his way to Palestine; here stood Sepharvaim (Sippar), the city of the books, as the Bible calls it; here, in fine, was the seat of the great Empires of Babylonia and Assyria. Fifty years ago, except some notices in the Greek writers, all we knew of these countries was what Scripture tells us of their relations to the kingdoms of Israel and Judea. The Greek reports were at second hand, for Herodotus, the father of history, visited Babylon, if he visited it at all, only after it had become the capital of a Persian province. Ninive at the same time had lain a heap of ruins for two hundred years. Of the works of Berosus, a Babylonian priest, who wrote the history of his country in the third century before Christ, there remained only a few fragments. The Bible includes only a few chance references to earlier Babylonian history, but becomes somewhat fuller, when, in the eighth century before Christ, the kings of Assyria stretched forth their arms to bring the kingdoms of Israel and Juda under their power. Then we hear of the great Sargonide princes, Salamanasar, Tiglath-pileser and Asarhaddon. But the conquest of the Hebrew kingdoms was, after all, but an episode in the history of Assyria and Babylonia. To impress us with the scantiness of their knowledge historians discussed the question whether Assyria and Babylonia were one or two empires. To-day all this is different. The excavations of Layard, Botta, Rassam, George Smith and de Sarzec and the decipherment of the cuneiform writing by Rawlinson, Hincks and Oppert have revealed to us the life story of two great empires and laid open to our astonished gaze one of the oldest, if not the oldest, civilization of the world. Our account of Assyrio-Babylonian education will be based chiefly on the native monuments and documents made known to us by these explorers and scholars and by the able men who have taken up their work.

To set in its true light our picture of Babylonian education, thus traced, we must premise a few words about the history and chronology of the peoples that dwelt in the valley of the Euphrates. Modern research has proven beyond doubt that the Babylonians and Assyrians, as well as the later Chaldeans were of Semitic extraction. Their language was closely akin to the Hebrew, and the portraits they have left of themselves and their kings at once suggest their relationship to the Jews. But these Semitic nations were not the original inhabitants of the country watered by the two great rivers of Mesopotamia, nor were the culture and learning of Babylon and Ninive built up by them. To the Sumerians and Accadians belongs this proud honor. Before Babylon became the capital of a great Semitic empire, the kingdom of Sumir and Accad had flourished and passed away. Who

were these Sumerians whose very names were unknown to our fathers? Oppert, Lenormant, Sayce, Schrader, Tiele, Hommel, Haupt, Winckler, Kaulen all agree that they were a race nowise allied to the Semites; according to many Assyriologists they belonged to the Ural-Altaic or Tartaric family of peoples, the same to which belong the Magyars, the Turks and the Fins in Europe. Their language was agglutinative, *i.e.*, it appended to an unchangeable stem, one or more transparent suffixes. In the structure of its sentences it was in strong contrast with the language of their Semitic conquerors. Before the Semites appeared in the Euphrates Valley these Sumerians had built up a culture, which may well amaze us, if we reflect how very remote was the day of their power and prosperity. They had laid the foundation of the arts and sciences, of sculpture and architecture, of arithmetic and astronomy; they had collected a code of laws; they had invented and developed a system of writing. When the Semitic Babylonians established themselves on the bank of the Euphrates and Tigris, they were illiterate and uncultured. From the Sumerians they borrowed their art, their science, and their system of writing, nay, to a large extent, their ideas of the gods and their mythology.

If the question be asked, "When did all this take place?" we must confess our ignorance. Ancient as some of the Babylonian monuments claim to be, none are so ancient as to reach times when the Semites were not yet in the land. The most ancient king of Babylonia, made known by the monuments thus far, Sargon I., of Agade or Agane, bears a Semitic name, and the very language of the oldest Sumerian inscriptions, Orientalists tell us, betokens that it was already decaying. When did Sargon I. live? Three thousand eight hundred years before the Christian era, most Assyriologists tell us. This venerable old gentleman, whose son Naram-Sin has left us some inscriptions and whose own cylindrical seal is now said to be in the British Museum, is assigned to this remote date on the authority of Nabonidus, the third successor of Nabuchodonosor, and the last king of Babylon. This monarch, in rebuilding the temple of the Sun God at Sippar, found its original foundation stone, which contained the documents enclosed by its founder, Naram-Sin. Nabonidus was proud of his discovery, which he mentions six times, speaking of Naram-Sin and his father as very ancient kings. Once only he assigns a date to them: Sargon reigned 3200 before his own day, *i.e.*, 3800 B.C. But Winckler justly observes that it is quite unlikely that the wise men of Nabonidus had an unbroken series of documents enabling them to determine the date of Sargon. Nabonidus's date is therefore a guess; it means merely that the Babylonians considered Sargon a very ancient king. So much for the oldest date in Baby-

lonian history. M. de Sarzec has found some very old inscriptions at Tello, but we cannot fix their date, at least at present.

If now we look for the earliest date in Assyrian history that is reasonably certain, the latest authorities are unanimous in fixing it in the neighborhood of the year 900 B.C.¹ The chronology of Babylonia is in a far less satisfactory condition. Hommel with the help of various lists of kings has constructed a chronological system exact to within ten years, as he claims; it extends to the year 1730 B.C. However, the gaps in the list of names are so numerous, that even if we were ready to suppose that the Babylonian tables were originally without error, we should still have our doubts regarding Hommel's dates. But who will guarantee that the Babylonian lists are without flaw in their numbers? Tiele, we are inclined to think, is much safer, when he puts the limits of certainty in Babylonian chronology at about 900 B.C.² Ptolemy's canon takes us to the year 747 B.C., the so-called era of Nabonassar. Beyond that we have a list of Assyrian *Limu*, which takes us to the date in question.³ From 900-1900 we are not without fairly reliable data in regard to Babylonian chronology. Perhaps we might extend this period to about 2250 B.C.; but beyond that point, all is guesswork, that may go astray five hundred years almost as easily as fifty. One more observation, before ending these preliminary remarks. The Babylonians, Assyrians, and Chaldeans were three Semitic nations, each of which at one time was the ruling people of Western Asia. There was not one Assyrio-Babylonio-Chaldean Empire, but three empires, the Assyrian, the Babylonian, and the Chaldean. The first two, however, overlapped each other, both in time and space. The earliest of the three was the Babylonian, which became an empire some say 2250 B.C., others 1850 B.C., when Hammurabi, sixth king of the Zabu dynasty conquered Iri-Aku, the Elamite, King of Larsa.⁴ The time of Hammurabi, and his immediate successor was the golden age of Babylonia, which remained an independent kingdom till it was absorbed by the Sargonide kings of Assyria (709-626 B.C.). The early sovereigns of Assur, whence the name of Assyria, were not even kings. They call

¹ Hommel, *Geschichte Babyloniens und Assyriens*, p. 178. Winckler, *G. Babyloniens und Assyriens*, p. 181. Tiele, *Babylonisch-Assyrische Geschichte*, p. 92.

² Tiele, *Babylonisch-Assyrische Geschichte*, p. 92.

³ As the Romans designated each year by the consuls thereof, so the Assyrians named the year after an officer called *Limu*. Lists of these *Limu*, compiled for chronological purposes have been found.

⁴ The date is very important for early Bible history. Lenormant, Vigouroux and Hommel (*loc. cit.*, p. 168), identify Iri-Aku with the Arioch, king of Ellasar, of Genesis, xiv., 1. Hommel considers Amraphel, king of Sennaar, to be the same as Hammurabi's father, Amar-Muballit.

themselves *Patesi*, i.e., priest-kings, of whom the earliest known to us by an inscription, Samsi-Rāmmon, Son of Ishmi Dagan, is assigned to about 1800 B.C. Of the Assyrian kings, properly so-called, the first was Assur-bel-nishi-shu, about 1500 B.C. The empire of Assyria ended with the destruction of Ninive, 605 B.C. With this date begins the new Chaldean empire, founded by Nabopolassar, the father of the great Nabuchodonosor. Its prosperity was short-lived. On July 5th, 539 B.C., Babylon was entered by Gobryas, the general of the Persian king Cyrus, and Babylon fell, never to rise again.

If the use of written symbols implies the existence of schools, schools in Mesopotamia must antedate the earliest princes we hear of in Babylonian history, Sargon of Agade and the kings and *patesi*, whose inscriptions have recently been found at Tello. The cuneiform system of writing found in these inscriptions is so complicated, as we shall see, that only long and systematic instruction and study could enable a scholar to master it. But putting aside these remote ages, there can be no doubt that in the reign of Hammurabi, the founder of the Babylonian empire,¹ well-developed institutions of learning must have flourished. Not only does this follow from the fact that even at that early period (B.C. 2250) deeds of sale and contracts of importance were recorded on clay tablets, but also from the numerous translations then made from the Sumerian into the Babylonian language. To this indirect testimony we can add the direct statements of contemporary documents. From a tablet entitled by Oppert and Lenormant the "Story of a Foundling," and shown by Hommel² to have been translated about this time, we learn that the foster-father of the foundling in question caused him "to be taught the art of writing and gave him an education." In a list of omens, also of this date, we learn that a child born with six toes will not go to school. As we descend the ages, proofs of the existence of schools multiply. While the chief writings left us by Naram-Sin, old Sargon's son, were the documents enclosed in the corner stone of the temple of Shamash, at Sippar. Assyrian kings, especially since Assur-nassir-pal (880 B.C.) set up statues and other monuments with inscriptions, sometimes quite lengthy. Why these inscriptions if reading was the privilege of the few? Why the libraries, founded not only in Babylonia, the home of culture, but also in Assyria? Long before Babylon rose to power Sargon I. of Agane, we are told, founded a library. But even if this statement be rejected we know that in many of the great Babylonian temples libraries existed at an early period. Assur-bani-pal had copies made in the

¹ Before him the kings of Babylon were local princes.

² Hommel, *Geschichte Assyriens und Babyloniens*, p. 387-8.

libraries of the temples at Uruk, at Kutha, at Larsa and at Agade. Senacherib founded a library at Ninive, where, in George Smith's opinion, 20,000 fragments of Assyrian books will reward the explorer that will give the time and money to dig them out. At Calah there was a library in charge of one of the astronomers of Sargon II. (721 B.C.) and Senacherib (704 B.C.). But to Assurbani-pal (668-626 B.C.), the last mighty king of the Sargonide dynasty, belongs the honor of having founded the greatest of all the Assyrian libraries in his palace at Nineveh. There he gathered, not by violence or plunder, but by sending forth his scribes to make copies of works preserved in the old Babylonian libraries, a collection of 30,000 clay tablets. In view of these vast accumulations of books, the copying of which must have employed an army of scribes, who will hesitate to admit that there must have been schools and numerous schools in the lands of Assur and Bel? The *dupsars*, or scribes, for the most part priests, must have been a large and important class, though they did not enjoy the same honor as their Egyptian brethren. Their services were in demand everywhere. The king called on them to write and read his dispatches, to calculate the courses of the stars and the eclipses of the moon, to foretell the future, to make known to him the laws, to immortalize his achievements; the general had him at his side to jot down the details of his battles, and to sing the praise of his exploits; the judge used them to record his decisions and to make him acquainted with the laws of the forefathers; and every Babylonian summoned them to record deeds of sale, adoptions, wills—in fact, records of any business transaction of importance. How fond the Babylonians were of multiplying documents one example will show. In 1874, George Smith bought a collection of about 3000 small tablets found by the Arabs in the ruins of Babylon. These were the famous Egibi tablets, a part of the contracts made by the Babylonian banking firm of Egibi & Sons in the course of several hundred years. But how many tablets had been lost? We may remark, by way of parenthesis, that Delitsch thinks Egibi to be the Babylonian transcription of Jacob, and holds that the Egibi were a Jewish banking house.

From very early times, therefore, schools were plentiful in Babylonia and Assyria. They were equally so under the Chaldean kings in the sixth century, before our era. The great Nabuchodonosor (604-562 B.C.) had the prophet Daniel, one of the Jewish captives, instructed in the wisdom and language of the Chaldeans.¹ He and his companions attended a school in the king's palace along with the children of the Chaldean nobles. The young

¹ Daniel i., 4.

Hebrews were treated just as Senacherib had treated Belibni, a young Babylonian, whom he afterwards made king of his native city.¹ In view of all these facts we may, without hesitation, put aside the statement of Diodorus Siculus, that the Chaldeans derived their learning from family tradition, the father being the teacher of the son. He was evidently misinformed; a fact which is not surprising, as he wrote many centuries after the fall of Babylon. Possibly, however, he had in view only the Chaldean magi and their astrological lore.

If we ask how far education was diffused among the people, the answer is not so easy. There are facts that seem to imply a wide diffusion of the art of writing. The numerous contract tablets, many as old as the first Babylonian dynasty and the reign of Hammerabi, appear to favor this view. But the contracts are always drawn up by a *dupsar* or scribe. The signatures of the contracting parties are replaced by the seal of the signer in the case of the rich and noble, or by the certified nail mark² of the less wealthy. This took the place of our cross. It might, therefore, happen that none of the principals or witnesses of a contract knew how to write, except the scribe or priest. Still, the Babylonians took elaborate precautions against forgery. Every important contract was written on a clay tablet, which was then baked. When the clay had hardened, a new layer covered the first copy of the contract, and on this new layer a second copy was engraved, and the tablet baked a second time. In case of dispute the outer shell was broken and the copy compared with the original. Unless, therefore, the priests or scribes were the forgers, we must presume that there were laymen well able to write. Maspéro thinks that the common people read the simpler astrological calendars.³ In Sayce's opinion some of the Babylonian libraries were for general use; Tiele, however, holds that they were intended for the exclusive use of the king, his scribes and sages, for the instruction of his sons, and of the future magistrates of his empire; they also served as state archives. They do not, therefore, prove the general spread of learning in Babel and Assur. Writing, Tiele adds, was certainly not a general accomplishment.⁴ The extreme complication of the cuneiform system of writing speaks for this view, for even to learn to read it, must have been the work of years. In the centuries immediately preceding the destruction of Nineveh, say from the eighth century before Christ downward, the business classes seem

¹ Vigouroux: *La Bible et les Découvertes Modernes*, iv., p. 446.

² The scribe wrote alongside of the nail-mark the words: "The nail-mark of, e.g., Iddina."

³ Maspéro: *Ægypten und Assyrien*, p. 327.

⁴ Tiele: *Babylonische Assyrische Geschichte*, p. 582.

to have acquired the art of writing, but they did not write in cuneiform characters. In contracts of that period we find the cuneiform text annotated in Aramæan script; in other words, in the alphabet invented by the Phenicians, which is the source of our own letters. Sometimes signatures are found in similar characters, but they are so far undeciphered. At this period, too, under Assur-bani-pal, women, also, the daughters of well-to-do merchants, were taught this accomplishment.¹ Certain it is the royal princesses had it, for on a tablet of the time of Assur-bani-pal's son, Assur-ital-ilâni-ukinni the king's daughter expels from the royal harem one of her relatives with the words: "No longer shalt thou write thy tablets, no longer recite the words (*atâ*) of thy lesson (*embu*) (?)." ² On the other hand, Assur-bani-pal's own words have led more than one Assyriologist to doubt whether all the kings of Assyria were able to read and write. "Palace of Assur-bani-pal," so reads the subscription of one of his tablets, "king of the universe, king of Assyria, to whom Nebo and Tashmîr have given open ears, who received clear eyes for the preparation (?) of tablets, while under the kings, my ancestors, nothing of the kind had been received, etc."³ And again, "This writing, to which no king before me paid attention, the secrets of Nebo, the contents of the library I caused to be written on tablets, etc."⁴ Lehmann goes so far as to say that we may not assume that any Assyrian king could read or write, unless we have a clear statement to that effect.⁵ Indeed, when we call to mind the amazing military activity of most of the Assyrian kings, when we recall that kings like Assurnassir-pal (885-59 B.C.) and Tiglath-pileser III. (745-28 B.C.), the opponent of the Jewish king Azarias, sallied forth from Kalah or Ninive, year after year, at the head of their armies, and marched from Elam in the east to Tyre in the west, from the mountains of Armenia to the shores of the Persian Gulf, we can well believe that these ancient war-horses resembled Marshal Blücher rather than Marshal Von Moltke, and seldom cudgelled their brains by deciphering cuneiform rebuses. However, we should not confound the Assyrians with the Babylonians. While the kings of Assyria and their nobles remind us of mediæval conquerors and their barons, the Babylonians leaned much more to a life of ease and consequently of culture. But even of the monarchs of Ninive, who were the lineal successors of the priest-rulers (*patesi*) of Assur, it is hard to believe that they were men ignorant of reading and

¹ Maspéro: *Ägypten und Assyrien*, p. 241.

² Hommel: *Geschichte Babyloniens und Assyriens*, p. 695, note.

³ Hommel: *loc. cit.*, p. 88.

⁴ Kaulen: *Assyrien und Babylonien*, p. 165.

⁵ Berliner: *Philologische Wochenschrift*, 1892, p. 431.

writing. How wide-spread was the knowledge of the Babylonian system of writing is apparent from its diffusion among neighboring nations. The Armenians, the Elamites, the Mesopotamians of Mitani, the Canaanites of Palestine, the Persians, even the Cappadocians of Asia Minor, used the cuneiform symbols. The discovery of the Tell-el-amarna tablets in 1888, proves that the vassals and governors of Egypt, under Amenhotep III. and IV. (fifteenth century, B.C.), made their reports to these Pharaohs in the Babylonian writing and language. Weighing all the evidence, therefore, we may safely conclude that if there were no common or district schools in Babylon or Ninive, there must have been, beside the court schools, many temple schools scattered throughout the cities of Bel and Assur, and that after 800 B.C., these must have been greatly multiplied.

What was the character of the temple and palace schools of Babylonia and Assyria? On their discipline and internal arrangement modern research has thus far failed to shed much light. From the fact that special libraries existed in special temples, it is not improbable that special schools were connected with the temples in question. In the temple school of Larsa, therefore, which had a library rich in mathematical works, mathematics was specially cultivated. Astrology was the favorite subject at Agade, while the so-called Izdubar epics were chiefly studied at Uruk. As no numerous school can exist without classes, the scholars in Babylonia no doubt were classified. But of examinations and methods of teaching we hear nothing. Fortunately, however, the library of Assur-bani-pal has given us a glimpse of most of the subjects taught, and preserved for us some of the school books of Assyria. As it has been clearly proved, that in every department of learning the northern Assyrian Empire was only the heir and imitator of the Babylonians, and as the languages of the two countries were practically the same, all that we shall learn of the schools of Assur may be applied to the schools of Babylon and vice versa.

The Assyrian scholar of course, began his studies with learning to read and write. This was a formidable task. Instead of twenty-six letters, the cuneiform has upward of six hundred signs. But this is only the commencement of the difficulty. If every sign had one fixed value or followed one certain principle of interpretation, reading while not easy, would offer no phenomenal difficulties. But a cuneiform sign sometimes stands for an idea (ideograms), sometimes for a word, or rather a word-like combination of sounds, sometimes for a syllable; sometimes it is not pronounced at all, but indicates that the word before which it is placed, belongs to a certain class (determinatives). Most symbols represent syllables, without reference to their meaning; of these syllables some are

simple like *ar*, *vi*, *ra*, *ri*, others more complex like *dar*, *rup*, *vus*. But very many of these syllabic signs, may also be used ideographically, *i.e.*, stand for words. The sign for "father" is read *abu* when it is used ideographically, but also represents the syllable *at*; a sign for "year" reads *sanat*, but as a syllable *mu*; a third sign may be read *chab*, *kir*, *rim*, or *lagab*. The writer is at liberty to use his sign for any of the values that belong to it and may place an ideogram in the midst of several syllabic signs, leaving the reader to guess what value to attach to it where it stands. The result may be divined by imagining how hard it would be to read English, if it were allowed to write every word after the fashion we sometimes see exemplified in a rebus. Thus if "elementary" could be written either *lmntare*, or *elmentry* or *lemntre*; or "oftentimes" were represented by *of 10—mes* or *of 10x*, or *of x*×, we should be making some progress toward the cuneiform system. To read an ordinary sentence, where the meaning helps to suggest the words, would be like deciphering riddles; to read proper names, with no guide at all, especially such names as the Babylonians were blessed with, is often next to impossible. To illustrate let us take the Biblical name Nabuchodonosor. Its Chaldean form turns out to be *Nabukudurususur*. If the word were written ideographically, and then read phonetically, we should call it, as was done by the first decipherers, *An-pa-sa-du-sis*. If written syllabically it might appear either as *Na-bu-u-ku-du-ur-u-sur* or *Na-bu-kud-dur-ru-su-ur*, or in ten other and widely different forms; the signs *ku*, and *kud*, however, would suggest no similarity in sound as *ku* and *kud* do in English. Then we might have a mingling of ideograms and syllabic signs and find AN-Pa-ku-du-ur-SIS. Let the reader remember, that this is no fine-spun theory but precisely what the Assyriologist meets with every day. That this script offered great difficulties to the old Chaldeans themselves, is manifest. Hence in Professor Kaulen's opinion, if the Chaldean sages failed to read the fateful words "*Mane, Thekel, Upharsin*" written by the mysterious hand at Belshazzar's feast, the failure was due in part to the difficulties inherent in the Chaldean system of writing. Be that as it may, we have convincing proof that the Assyrians were fully conscious of these difficulties. In Assur-bani-pal's library have been found a large number of tablets, covered with vocabularies and syllabaries, *i.e.*, lists of cuneiform signs with their phonetic or ideographic equivalents. These lists may have been consulted at times by puzzled Babylonian *dupsars*, but they also and perhaps chiefly served as spelling books, as Menant, endorsed by the Abbe Vigouroux, holds¹. Representing

¹ Vigouroux: *La Bible et les Découvertes Modernes*, iv., p. 444.

the cuneiform sign by X, Y, Z, we may convey some idea of these syllabaries by the following illustration:¹

Pronounced phonetically.	Sign.	Meaning and read ideographically in Assyrian.
<i>a-na</i>	X	<i>shamu</i> (heaven)
<i>di-in-gir</i>	Y	<i>ilum</i> (god)
<i>na-ah</i>	Z	<i>nab-bu</i> (sky?)
<i>mu-lu</i>	X ¹	<i>Kakkabu</i> (star)

It is worthy of remark that the phonetic equivalents in Assyrian are the old Sumerian words (*ana*, *dingir*, *nab*, *mul*), for heaven, god, sky (?), star, whence it is inferred that the Babylonians borrowed these characters from the Sumerians. Copies of these lists were placed before the scholars and they were made the basis of reading lessons.

Many Assyrian scholars, as we have seen above, were content if they learned to read; and no wonder. A ready reader of these riddles must have had his wits unusually sharpened, and probably considered himself quite a clerk. Besides, the complexity of many of the cuneiform symbols and their number made writing very difficult. Of course this did not prevent many from undertaking to learn it. These were at first made to write some of the signs explained in the syllabaries, and then copied short sentences sometimes of a proverbial character, such as our calligraphic copy-books contain to-day. We subjoin a few Assyrian specimens: "Door and bolt are made fast—Oracle to oracle; to the oracle it is compared—A heap of witnesses as his foundation he has made strong—By himself he has dug and wrought—The joists of his wall he plasters—The tenant of the farm two-thirds of the produce to the master of the orchard pays out." These samples taken from a Sumero-Babylonian reading book, do not err on the side of idealism. Here and there the student was made to copy bits of verse, and these are not quite so practical and home-spun. "If evil thou hast done, to the sea forever thou goest—Like an oven which is old, against thy foes be hard—The fruit of death may the man eat, the fruit of life may he achieve."² The prose sentences quoted are from a collection of agricultural precepts first written in old Sumerian. The copies that have been found contain the Accadian or Sumerian original with a Babylonian translation. They were used to learn to read and write not only Babylonian but also Sumerian, which the Babylonian priests

¹ To guard against misconception, it is necessary to state that other syllabaries contained only two columns, one of signs, one of phonetic values. A tablet of this sort contained when intact, the explanation of 360 signs.

² *Records of the Past*, 1st series, xi., p. 151.

regarded as a sacred language, and cultivated, as Catholic priests study Latin. Bertin tells us¹ that in the British Museum there is a clay exercise-book on which some of these precepts have been copied three times over for practice. Of these precepts there was originally quite an extensive collection, comprising ten or twelve tablets, each holding about four printed 12mo. pages of matter. Most of them contained agricultural precepts, one at least, precepts for a man's guidance in private life. To show how intensely utilitarian was the instruction of these Babylonian temple schools even in what we might call the lowest classes, we quote the translation of column I. in Bertin's translation.²

II. "In the sixth month of the year the farmer marks his estate. III. He agrees about his covenant."³ IV. He completes the wording of the covenant. V. He collects his tax gifts and surrounds the field with hedges. VI. He collects his flock and gathers the birds. VII. He works from dawn to dusk. VIII. When the time for working the field comes, he ploughs, rakes and divides it. IX. For every 60 measures of grain the farmer takes 8 measures of wheat produce, straw in stokes, grain thrashed and winnowed."

We must not forget the writing implements of our Babylonian school-boy. In later Assyrian times, subsequent to the year 850 B.C., the scribes sometimes used skins, tablets and papyrus, on which they wrote with reed pens in characters derived from the Phœnicians. They used these chiefly to jot down hastily memoranda not intended to last. In some of Assurbanipal's historical bas-reliefs we see scribes on the battle-field taking an inventory of the booty in this manner. But though the marshy soil of Chaldea, on the shores of the Persian gulf abounded in reed plants, from which paper might have been made, the ordinary, and in ancient times, probably the only writing material were tablets of clay. Among the very ancient statues found by M. de Sarzec at Tello, is a seated figure with a clay writing tablet on his knees,⁴ while another represents the *patesi*, Gudea, as an architect who has drawn the plan of a fortress on a similar tablet.⁵ On a tablet is found the writing exercise we have referred to above. Such a tablet, therefore, the Babylonian scholar held on his knee; the side on which he was to write was covered with clay, still soft and impressible. On this he engraved his wedge-formed signs with a stylus having a triangular point. When the writing was finished, the tablet was hardened by baking.

¹ Bertin in *Records of the Past*, series ii., vol. iii., p. 92.

² *Op. cit.*, p. 94. Paragraph I. is missing.

³ *I.e.*, with his tenants.

⁴ Babelon, *Manual of Oriental Antiquities*, p. 28-9.

⁵ *Ibid.*, p. 81.

When the student had mastered the elements of reading and writing he began to practice the art he had acquired, by reading selections from the rich treasures of Babylonian literature, a great part of which was inherited from the Sumerians. Consequently with these Babylonian language lessons was combined the study of the sacred Sumerian originals. The comparison of the two languages directed attention to grammatical forms and the relation of derivatives to their parent words. In the schools of Babylon, therefore, were sown the earliest germs of grammatical science. It is interesting to observe that even in Hammurabi's age, two thousand years before the Christian era, the advantages of studying a foreign language were practically demonstrated. We have already spoken of the Babylonian vocabularies and syllabaries. Besides these, Assur-bani-pal's library has furnished us paradigms both of nouns and verbs, lists of words derived from the same parent word, and collections of phrases. The following is a sample of what we may call declension. The left-hand column gives the Sumerian word, the right-hand its Semitic or Babylonio-Assyrian equivalent.

ki-ni-ta = *itti-shu* (with him). N.B. *ki* is Sumerian for place, *ta* is a post position, hence *ki-ni-ta* = in his places.

ki-ni-ni-ta = *itti-shunu* (with them).

ki-mu-ta = *itti-a* (with me).

ki-mi-ta = *itti ni* (with us).

ki-zu-ta = *itta-ka* (with thee).

ki-zu-ni-ni-ta = *itti-ku-nu* (with you).¹

Notwithstanding the hoary antiquity of civilization and literature on the banks of the Nile, the Egyptians never made the first step in the grammatical analysis of language. Even in Greece, the golden age of Pericles had long passed before grammar was begotten almost as the posthumous child of the Socratic philosophy. If, then, the Semitic Babylonians in this respect outstripped the men of Athens and of the hundred-gated Thebes, we may justly ascribe it to the influence of their Sumerian studies.

To ask what were the reading books used by the temple schools of Babylon is to open a large field of inquiry. We begin with literature. The simplest narratives and those best fitted for the elementary scholar were the fables. The stories with which we instinctively connect the name of Æsop were known to the Babylonians even before the time of Hammurabi, the founder of their empire (2250 B.C.). In Smith's "Chaldean Genesis" are found fragments of fables entitled "Story of the Goat," "Story of the Ox and the Horse," "Story of the Serpent God," and others.

Far more ambitious and suitable for riper scholars were the

¹ Hommel, *loc. cit.*, p. 387.

Babylonian epics, such as the legend of Ishtar's descent to Hell, and the Izdubar or Nimrod epic. Among these none have attracted more attention than the so-called Legends of Creation, of which the story of the Deluge is an episode. Its author, Sinliki-unnini, says Hommel, must have lived not long after the 23d century B.C.¹ As a sample of these Babylonian epics we subjoin a passage from the Deluge episode in the Izdubar epic, as given by Jensen. The reader will recognize at once its resemblance to the Scripture narrative.

When the seventh day came,
I sent forth a dove and let her fly. The dove flew to and fro,
But as there was no place for her to perch on, she returned.
Then I sent forth a swallow and let her fly. She flew to and fro,
But as there was no place for her to perch on, she returned.
Then I sent forth a raven and let him fly.
The raven flew about, saw the disappearance of the water,
Approached, [scream]ing and crying, but he returned not.
Then I opened the ship, offered a sacrifice towards the four winds,
Brought a propitiatory offering on the top of the mountain.²

Strange though it may seem at first sight, in most literatures poetry precedes prose. In Greece, Homer precedes Herodotus; in Rome, the old Saturnian verses were the only literature known before Greek influence laid the foundation of the classic literature of Rome. Among the Teutonic tribes, as Tacitus tells us, heroic ballads were the only form of records known in his day. In Babylonia, too, the great epics antedated every attempt at history. Still the Babylonians, and especially the Assyrians, were by no means devoid of the historic sense. The institution of special magistrates (the *limu*, referred to above) to serve as a basis of chronology would alone prove this. Furthermore, they have left us chronicles, some of which extend over several centuries. The so-called Synchronous History of Babylonia and Assyria is, perhaps, hardly entitled to its high-sounding name. It is an abstract of the treaty relations of the two empires, including, however, a brief account of the wars, that for the most part preceded the treaties. For the most part no attempt at literary effect is made in these chronicles. As might be supposed from his taste for literature in general, Assur-ban-ipal has left us annals, in which we cannot fail to recognize an attempt at literary embellishment. That these annals and chronicles were studied in the priest school seems certain; some historical tablets, with lists of Babylonian kings and the contemporary sovereigns in other places, have been recognized as schoolboy exercises. To infer, thence, that these old Semites

¹ Hommel, *Geschichte, Babyloniens und Assyriens*, p. 394.

² Jensen, *Die Kosmologie der Babylonier*, p. 381.

valued history for its own sake, however, would be hazardous. The annals were studied for utilitarian reasons. The Babylonians were so precise in their legal instruments, deeds, contracts, etc., that they could not get along without these chronicles. Among them, therefore, history was not studied as a means to promote culture or patriotism, but merely and wholly as professional knowledge.

The other studies pursued by the scholars of the temple schools in Mesopotamia, bore the same utilitarian character; this should neither surprise us nor lessen our interest in Babylonian education. The schools, no doubt, chiefly served utilitarian ends; they were to provide priests for the temples, judges, scribes, notaries, administrators, architects and astrologers for the King. The far extending dominions of the Assyrian monarchs, the countless minor states subdued by their arms and governed by their satraps, for instance, made an attempt at descriptive geography a necessity. How crude and odd their geographical science, if it deserves the name, was, will appear from a specimen.

1. The country of x¹ let it be explained as the country of Bel. . . .

3. The country of Amanus as the country of cedars. . . .

5. The country of Lebanon as the country of cypresses. The country of Assur as the country of . . . ¹

8. The country of Sargon² as the country of books. The country of Sepek as the country of *allanu*.

17. The country of Milukhkha³ as the country of turquoise. The country of Maganna⁴ as the country of copper.

25. The river Tigris let one explain as the bringer of fertility.

26. The river of Euphrates as the life of the world.

27. The river Arakhtu (Araxes) as the river which flows into Babylon.

31. The river of the mighty waters as giving life to the enclosure of life.⁵

In natural history the Babylonians were interested for the same practical reasons. Of the hundred dependent states that paid them tribute, perhaps a few sent them silver and gold. Most of the tributaries paid their taxes in kind, forwarding rare animals or minerals, as well as corn and other food products. Naturally this led to comparison and classification, and modern scholars assure us that the Assyrians really showed talent in the direction of biology.

¹ The name is lost.

² *i.e.*, Aganê or Agadê. Compare Kiryath-Sepher—the city of books in Jos. xv., 15, 16.

³ Meroë in upper Egypt; but perhaps a part of Libya or Arabia is meant.

⁴ The Sinaitic peninsula.

⁵ *Records of the Past*, ser. i., vol. xi., p. 147 ff. Most of these geographical lists are from Assur-bani-pal's library, but many were copies of more ancient tablets.

They made attempts at classifying animals, which show that they had rational principles of comparison. The dog, lion, wolf (carnivora) belonged to one class, the ox, sheep, goat (herbivora) to another. Of dogs they distinguished the following species: the house-dog, the hound, the lap-dog, the dog of Elam. They classified birds as birds of prey, water-birds, marsh birds, etc. We see they recognized genera and species. Besides its popular, each animal had a scientific name.¹

Arithmetic next claims our attention. Its utilitarian character is self-evident, and this leads us to expect that the Babylonians cultivated it with much earnestness. Accordingly we find that the Greek philosophers speak in terms of high praise of the mathematical achievements of the Babylonians. Our knowledge of detail, however, is for the most part derived from the cuneiform monuments. It is based chiefly on some tablets found in the ruins of Senkereh, the ancient Larsa. In the temple school of that venerable city arithmetic was cultivated as a specialty, for its library was rich in mathematical works. Let us see what they tell us of Babylonian arithmetic.

To begin with numeration.² The Babylonians used both the decimal and the sexagesimal system. In writing numbers, they had discovered the device (which we consider characteristic of Arabian numerals) of placing the unit column at the extreme right and assigning to each column to the left a value tenfold that of its right-hand neighbor. But whether they had perfected this system, by inventing a sign to be placed in the several columns, when the number to be written contained no units of that value, in other words, whether they had invented a nought (o) or zero sign, has not yet been determined. Further excavations at Senkereh, it is hoped, will settle this question. So far the numbers met with are below one million in value; nor should this astonish us. In every day life, even to-day we seldom deal with millions, and few of us conceive what a million means in the concrete. Numeration according to the sexagesimal system was analogous to the decimal system just explained. The right-hand column contains the numbers up to sixty; the next column to the left is for the first power of sixty, the second for the square of sixty, the third for the cube. The square of 16, *i.e.*, 4096 would be written 1.8.16, that is to say $1 \times 60^2 + 8 \times 60 + 16$. In the same manner they express sexagesimal fractions. Of other fractions signs are found for $\frac{1}{6}$, $\frac{1}{3}$, $\frac{1}{2}$, $\frac{2}{3}$, $\frac{5}{6}$, in other words for $\frac{1}{6}$ and its multiples up to the unit. The sexagesimal system was grafted on their method of reckoning time;

¹ Kaulen, *Assyrien und Babylonien*, p. 169.

² For simple operations the Babylonians, as all the ancient nations, used their fingers; for more complicated ones the abacus.—Cantor, *op cit.*, p. 84.

for sixty years is the Babylonian *soss*, $3600 = 60^2$ is the *sar*, and 600 the *ner*, a result of blending the sexagesimal and decimal systems. The table of Senkereh exhibits a list of squares and its reverse a list of cubes, which proves that not only the Semitic Babylonians but also their Sumerian predecessors carried on computations involving squares and cubes up to the cube of 60. The sexagesimal system was also applied in astronomy to divide the circumference of the circle into 360 parts or degrees, the degrees into sixtieths (minutes) and these into sixtieths of the second order (seconds).¹ This system was subsequently applied to measures of time also. Whenever we look at our watch or consult our maps we therefore use methods of computing, derived through several links, from the Sumerians of ancient Chaldea. The Babylonian system of measures and weights also is an achievement worthy of our admiration, as well as of our gratitude; for our tables of weights and measures can be traced with many modifications, of course, to the Chaldeans of old. Their system of long measure, Hultsch tells us,² was based on rude astronomical computations. In an hour, they computed, the sun on June 21st, passes over a space equal to thirty times its apparent diameter; in two minutes it passes over the space equal to its own diameter. They then ascertained how far a fast walker could go in the same time, and made this distance, known to us by the Greek name *στάδιον*, the basis of their long measure. One-third hundred and sixtieth of the stadion (620 feet) was the cubit or ell (20.7 inches). From this they derived their dry and liquid measure, the *maris* being one-fifth of a cubic ell, while the light royal talent was the weight of a *maris* of water.³ The old Babylonian mathematicians, therefore, at bottom, were guided by the same principles on which the metrical system is founded. The Babylonian system of weights and measures was borrowed by the Phœnicians, who communicated it with some of the original names (Greek *μνᾶ* = Assyrian *maneh*) to the Greeks; from whom after modification it was adopted by the Romans, who, in turn, transmitted it to us moderns. Four thousand years, perhaps more, have rolled by since the men of Babylon devised this ingenious system.

But we must hasten to study their achievements in the field of commercial arithmetic. The Babylonians, it is true, did not invent coined money. This was a triumph reserved for the Lydians or the Greeks. But the old Semitic masters of western Asia had made the achievement easy for them. They had established gold and silver as the measure of value, divided the metals into weights

¹ Cantor, *Vorlesungen über Geschichte der Mathematik*, p. 72 ff.

² Hultsch, *Griechische und Römische Metrologie*, p. 383.

³ Hultsch, *op. cit.*, p. 392.

of convenient size and form for carriage, and made its measurement independent of the ordinary system of weights. Next they established a fixed ratio of value between gold and silver, the formula being $1:13\frac{1}{3}$, a ratio adopted by all the civilized nations of antiquity and lasting until the downfall of the Western Roman Empire. While their *shekels*, *manchs* and *talents* were not stamped officially by the state, the Babylonians circulated lenticular pieces of gold and silver going by those names, that served all the purposes of a modern currency. Hence we need not wonder that they invented checks and drafts, with and without interest. Here is a specimen:

FOUR MINÆ OF SILVER (\$180)

of the coinage of Karkhemish, Neriglissar lends to Nabu-sumiddin, son of the crown-keeper, Nabu-rahim-baladin of Dur Saryukin, the same to bear 5 silver shekels (\$3.75) interest per month. On the 26th of Ijjar of the year named after Gabbaru (667, B.C.).¹

Money at Babylon we see brought $2\frac{1}{2}$ per cent. monthly, or 25 per cent. *per annum*, in the first year of Assurbanipal's reign.

In geometry, as far as we can judge, the progress of the Chaldeans was very moderate. Chaldean students were not distressed by any complex problems and theorems. Their geometrical science, as set forth by Cantor, may be resumed in a few lines. The Babylonians were acquainted with parallel lines, triangles, quadrangles, and squares, as also with the right angle, as a geometrical element. Perhaps the right angled triangle with the sides 3, 4, 5, was known to them, though this remains doubtful. They had learned to trisect the right angle, and divided the circumference of a circle into six equal parts by using the radius as chord. In calculating the length of the circumference they used a formula which makes $\pi = 3$. This is the sum-total of the geometry of the Babylonians, as now ascertained. Their knowledge seems extremely fragmentary and limited, especially when we compare it with their acquirements in astronomy.

We have used the word astronomy; we should have said astrology. It seems very questionable whether the Chaldeans ever thought of astronomy as a science. To them it was the hand-maid of divination. Their observations of the heavenly bodies were made with a view to gathering materials for forecasting the future. Their so-called calendars, or tables of omens, were constructed very much on the plan of the weather almanacs so well known to our grandfathers and grandmothers, and perhaps not wholly discarded to-day, when the papers daily furnish us the forecasts of the official weather prophets. One of these venerable calendars, the simpler of which Maspéro thinks were understood by

¹ Kaulen, *op. cit.*, p. 173.

the majority of Assur-bani-pal's subjects, was ascribed to Sargon of Agadê. It is quite as unlikely that Sargon compiled this calendar as that he reigned in 3800 B.C., but undoubtedly the document was very old. Nothing will give us a clearer conception of the religious astronomy of the Chaldeans than a brief transcript from one of these calendars: "Month Ab, 16th day—Eclipse of the moon; the king of Accad dies; Nergal, the god (of war), devours the land. 20th day—Eclipse of the moon; the king of the Chatti country dies; the king of the Châte country comes and seizes the throne. Month Elul, 15th day—Eclipse of the moon; the king's son kills his father and seizes the throne; an enemy comes and devours the land." It was the supposed connection between the eclipses and other celestial and meteorological phenomena on the one side, and the fate of countries and kings on the other, that led the Chaldeans from remote antiquity to observe and record the movements of the stars. The nephew of the great Aristotle, Callisthenes, who accompanied Alexander the Great on his Persian expedition, sent his uncle Babylonian astronomical observations which reached back to 2234 B.C. We have reports made to the Assyrian kings by their astrologers which were embodied in the proper temple records; for the astrologers were priests. As no consul at Rome undertook any important work, civil or military, without consulting the birds and the omens, so no king of Ninive began an enterprise without ascertaining that the stars permitted it. The observations thus taken were studied by aspiring candidates for the Chaldean priesthood, and formed a part of their theological course.

But what advantage did science reap from these superstitious practices? Unlikely, as it seems, Chaldean astrology was the mother of astronomy. With the dross of astrological superstition was mingled many a nugget of the gold of science, which in time was separated from the rubbish with which it was associated, and which has been handed down even to our day. In the first place, the Babylonians knew that 233 lunar months made nineteen solar years; nay, they had a pretty exact knowledge of the slight difference between the two members of this equation; in other words, they knew the year of $365\frac{1}{4}$ days. They divided the year into lunar months, intercalating two months every eighth year, and divided the week into seven days, sacred to their seven great heavenly bodies: Shamas, the sun; Sin, the moon; Nergal (Mars), Nebo (Mercury), Marduk (Jupiter), Ishtar (Venus), Ninib (Saturn). A comparison with these names of the days of the week on the one hand and their names in our own language, and those inherited by the French from the later Romans on the other hand, will show the Chaldean names have lasted to the present day.

Besides the five greater planets, it is probable that Jupiter's four moons were known to the Babylonians;¹ and they clearly distinguished between planets, fixed stars, comets and meteors. Many groups of fixed stars were recognized and named by them, and most of the signs of the zodiac as well as our names for them can be traced back to the star-gazers of Babylon and the land of Sumir. What is still more surprising, heavenly planiglobes on clay tablets have been found, proving that they attempted to represent the heavens graphically. Here the equator was divided into 240° and the ecliptic into 360° . A report in the collection of Sargon II. (721-705 B.C.), refers to observations of the phases of Mercury and Venus. The daily mean motion of the moon was computed at $13^{\circ} 10' 1''$, a result which agrees with modern science. They predicted eclipses, though not always successfully. The earth they held to be round², or perhaps it would be more correct to say, they conceived it as half a sphere, for we have no proof that they believed in antipodes. When we bear in mind that these results were achieved with the naked eye, for though a convex lens has been found in the ruins, it is not believed that the astronomers of Babylon had telescopes, we cannot refuse to acknowledge the debt of gratitude under which the Chaldean astronomers have laid their successors.

Astronomy we have said, was studied by the Chaldean priests as a part of their theology, if we may so call it. When we look for their ethical and metaphysical speculations, we are disappointed. Like the Roman religion, that of Babylon and Ninive was practical and liturgical. In their hymns only do we find imbedded their views of the end, the duties and responsibilities of man and his relations to the divinity. That they believed in a future life, has been denied. In 1878, however, Halevy published in the "Records of the Past,"³ two fragments proving that the Assyrians believed not only in a future life, but in the recompense of the just after death. They read as follows: "Lot of the just after death:"

1. Wash thy hands, cleanse thy hands.
2. Let the gods thy elders wash their hands, cleanse their hands.
3. Eat sacred food from sacred plates.
4. Drink sacred water from sacred vessels.
5. Prepare thyself for the judgment of the king of the son of his god (*i.e.*, the just man).—After judgment.—
2. They have brought the sacred water.
3. The goddess Anat, the great spouse of Anu.
4. Will cover thee with her sacred hand.
5. The god Iau will transport thee to a place of delights.
6. He will transport thee to a place of delights.
7. He will place thee in the midst of honey

¹ Jenson, *Die Kosmologie des Babylonien*, p. 130-1.

² Jenson, *op. cit.*, p. 161.

³ Ser. i., vol. xi., p. 161.

and butter. 8. He will pour into thy mouth reviving water. 9. Thy mouth will be opened for thanksgiving." In a prayer for an Assyrian king we read, "And after the life of this world, at the feasts of the silvery heights, of the court of heaven, in the land of the blessed, and in the light of the fields of the happy, may he lead a life, everlasting, holy, before the face of all the gods that dwell in Assyria."¹ It is true, however, that some texts speak of the life after death as a most doleful existence.

The doctrine of reward and punishment in the life after death, implies the doctrine of merit and sin during man's existence on earth. Among the manifold studies of the Babylonian priest schools, none, perhaps, speaks more powerfully to the modern heart and mind than their psalms. They have much of the ring of the penitential Psalms in Holy Writ. The following psalm addressed to Ishtar, speaks for itself:

"Sublime Lady, whose commands are irresistible,
I will speak this prayer: What is good for me, may she do to me,
My Lady, to me who have borne the yoke of sin since my youth,
Food have I not eaten, weeping was my cheer,
Water have I not taken, tears were my drink;
My heart was merry no longer, my soul was not cheerful, bitterly I wail,
Manifold are my sins, my soul is weighed down,
O my Lady, teach me to know my wrong doing, grant me forgiveness,
Cover up my sins, raise up my eyes."

A passage from another psalm will enlighten us as to what the Assyrians considered to be their duties and what they regarded as sin. It reads like an examination of conscience.

"Have I estranged father from son, brother from brother, friend from friend?
Have I refused to free the captive, to deliver those in bonds and in prison?
Have I rebelled against my God or despised my goddess?
Have I taken what belonged to another, or entered my neighbor's house with evil intent?
Have I done wrong with my neighbor's wife?
Have I shed human blood, or robbed any one of his garments?"²

Even the proud Assyrian monarchs were possessed by this feeling of responsibility, and felt deeply their wrong-doing, as appears from this prayer of the mighty Assur-bani-pal: "Lord, extinguish my sins and blemishes before Thine eyes, that I may feel that I am reconciled to Thee. For I am only the slave of Thy power, the adorer of the great gods."³ What a contrast between this open

¹ Kaulen, *Assyrien und Babylonien*, p. 146, where several other texts are given establishing this important fact.

² Hommel, *op. cit.*, p. 264.

³ Schmidt-Hannap, *Geschichte der Erziehung*, i., p. 263.

avowal of sinfulness and responsibility and the haughty self-worship of the Egyptian Pharaohs, who thought themselves the incarnation of Amon Ra!

Very different and far less sympathetic is the impression made upon us by the Babylonian magical formulas and incantations. Among the Chaldeans magic took the place of medicine. Whether a man had a severe headache or suffered agonies from the plague, or struggled with pitiless consumption, he called for the priest, who proceeded at once to exorcise by magic, the evil spirit that caused the sick man's distemper. Many of these magic formulas were stored in Assur-bani-pal's library. Lenormant has written a very learned work on the subject. Along with much valuable lore, the Sumerians had handed down this trash to the Babylonians. When incantations failed, Herodotus tells us, the sick man was taken to the market place, and an appeal was made to goers-by to suggest what their experience told them, might help the unfortunate. Only one medical receipt so far has been found in Assyrian literature; it is meant for the treatment of some skin disease; it prescribes an ointment made of a mixture of water, date sugar, wine, bitter hydromel, the sick man's urine, honey and sweet oil. Evidently, modern doctors, could learn but little from their confreres on the banks of the Euphrates.

From Assyrian bas-reliefs and texts we learn that the religious worship of the people of Ninive and Babylon consisted of hymns accompanied by instrumental music. Music, therefore, was one of the accomplishments taught in the priest schools. Little is known of this branch of instruction, however, except that the chief instruments employed were harps and cymbals.

While considering the liturgical worship of the Chaldeans, we must say a word of the Chaldean Sabbath. Sabbath is an Assyrian as well as a Hebrew word. In the Babylonian legend of the creation the Sabbath is spoken of as a day of rest. To learn the details of the Sabbath celebration as prescribed to the peoples of Assur and Bel, we shall go to an old calendar of feasts, said to be of Sumerian origin. "On the Sabbath Day," we read there, "thou shalt eat no birds and no cooked fruit, nor change thy garments, nor offer sacrifice, nor drive out, nor give laws, nor issue orders, nor take medicine." The passage reads almost like an extract from the New England Blue Laws.

Religious architecture was far less prominent in Assyria than in Egypt. The palaces at Ninive and Babylon, Assur and Calah outshone the temples, though the great *Zikurat*, or pyramid temple at Nimrud, which is identified with the tower of Babel, was perhaps the most striking edifice in old Borsippa. Architecture, however, was probably taught in the temple schools. Of the method

of teaching it we only know that even the priest-ruler, Gudea of Sirgulla (or Sirpulla, or Lagash, as the last authorities call the place), who was an architect, drew on clay tablets regular plans of the structures he proposed to erect. A statue of Gudea has been found, holding on his knees a tablet, with the plan of a fortress with bastions, flanking towers, gates and battlements, drawn to scale, the scale being attached to the plan.¹ Sculpture in stone and bronze, too, was brought to considerable perfection in the Mesopotamian countries, but nothing has been found that throws light on the methods followed in teaching the fine arts. We shall, therefore, pass them over in silence. One remark the reader will pardon. As in Egypt, the most ambitious works of the empire of the Thothmes and the Ramses cannot compare in truthfulness and merit with the Sheikh el Beled and the Seated Scribe, so some of the earliest statues found at Tello by M. de Sarzek far surpass the products of the Sargonides and Nabuchodonosor.

Before concluding this sketch of their education we must say a few words about the jurisprudence of the Chaldeans. We are amazed to see how far back into dim prehistoric times extends the reign of law on the shore of the Gulf of Persia. Before the advent of the Semitic Babylonians the Sumerians had not only laid its foundations, but reared on them a superstructure so firm that it was not shaken when the new comers became the lords of their country. The Sumerian legal system was not merely a primitive attempt to check crime and violence. It regulated family relations, established wise and practical methods for the transfer of property, placed deeds and contracts under the sanction of the law, and provided a fair and reliable basis for commerce. As early as Hammurabi's reign (2250 B. C.) we find numerous contracts drawn to suit the requirements of these laws. Nay, more, even in his reign we find copies of the original Sumerian laws alongside of their Babylonian translations. There can be no doubt that even then, at the very dawn of history, these laws were taught in both languages in well-organized schools. A few specimens of this early product of Chaldean civilization may fitly close our sketch of its education. Their elucidation is chiefly due to the learned Jesuit, Father Strassmeyer, and to M. Oppert.

Law A.—If a son say to his father, "Thou art not my father," the latter castrates his son, puts him in chains and sells him for silver.

Law B.—If a son says to his mother, "Thou art not my mother," he is emasculated, and driven from the city and from home.

Law C.—If a father say to his son, "Thou art not my son," the son is driven from house and home.

¹ Babelon, *Manual of Oriental Antiquities*, p. 81.

Law D repeats this of the mother.

Law E.—If a wife ill treat her husband, and say, "Thou art not my husband," she is thrown into the river.

Law F.—If a husband say to his wife, "Thou art not my wife," he pays one *mina* of silver.

Law G.—If an overseer kill or maim hired slaves or let them escape, or cause them to fall ill, his hand shall pay the owner half a measure of grain per day.

The later Semitic laws soften these provision in many ways, but also show that the Semites did not treat women with as much consideration as the old Sumerians.

Unfortunately, as we have already said, our documents give us no glimpse of the inner life of the Babylonian school. The family laws, we have cited, make it likely that their discipline was strict, nay harsh. That the schools, being intended chiefly for the instruction of priests and state officers, were state creations, is a safe inference. This is confirmed by the fact that, in Assyria at least, the libraries, even though intended for the people, were founded only by the kings. In Babylonia, we hear of libraries established by private persons. After the introduction of the Aramaic script there may have been private schools. At any rate, in Chaldea, as in Egypt, the aim and object of the schools were directly utilitarian. The love of learning for learning's sake was little, if at all, thought of. Certainly of all the great Assyrian kings, whose monuments have come down to us in large numbers, only Assurbanipal seems animated with a nobler, more idealistic love of learning. But utilitarian or not, Babylonian education was surprisingly advanced for the early period to which we have traced it; Assyriology has revealed to us so many astonishing results that we cannot but regret that it cannot complete the interesting picture of which it has sketched the outline.

Phœnician education should be especially interesting to us. To the old Canaanites of Tyre and Sidon we are indebted for the basis of our own education—our alphabet. Though the Chaldeans were the first successful students of the stars, it was the Phœnicians who spread Chaldean astronomical lore, and applied it to navigation, which they taught to the Greeks and Romans. Lastly to the Tyrians and Sidonians Greece owed its first knowledge of Egyptian and Assyrian art, which the Hellenes so ennobled and perfected. These intelligent and enterprising merchants having by their adaptation, whether of the Egyptian demotic, as E. de Vogüé thought, or of the cuneiform, according to Hommel's views, reduced the written symbols to twenty-two signs, made reading and writing so easy that their education could be largely devoted to the cultivation of literature and science. But while the fates

have been kind to the records of Egypt and Assyria, a cruel doom has well-nigh obliterated Phœnician culture. Though all agree that the Phœnician alphabet originated centuries after the hieroglyphics of Chaldea and Egypt, we cannot say when it was devised. The oldest Phœnician inscription found hitherto is that on the fragments of a *patera* or bronze bowl, picked up in Cyprus in 1872.¹ The archaic type of the letters has led palæographers to ascribe to it a date some hundred years earlier than that of the Moabite stone. The Moabite stone with an inscription in the Moabite tongue, but Phœnician characters, is dated. It was an altar set up by Mesha, the king of Moab, who is mentioned in 2 Kings III. about the year 890 B.C., to commemorate his victory over the Israelites. The Cypriot, or, as it is called by scholars, the Baal-Lebanon inscription, recites that " . . . a citizen of Carthage, Servant of Hiram, King of the Sidonians, gave this to Baal Lebanon, his lord, of good brass." If the savants are right, the Hiram here mentioned may be Hiram, king of Tyre, who was Solomon's ally and who helped him to build the great temple of Jerusalem. This, the oldest extant piece of Phœnician writing, goes back to the eleventh century before Christ. But no Orientalist doubts that the art of writing was known in Tyre and Sidon long before Solomon. In the fifteenth or sixteenth century the Egyptian governors of the Phœnician city of Gebal, or Byblus, wrote their reports to Amenhotep IV., in cuneiform characters and in a Semitic dialect. There is no doubt that Phœnician culture and schools go even further back. Yet, old as Phœnician civilization was, its records are lost. The air of the Canaanitist seacoast did not spare paper and parchment, as the dry Egyptian climate did, nor did the men of Tyre and Sidon, like the Babylonians, commit their thoughts to clay tablets. The devastating arms of Nabuchodonosor and Alexander the Great dealt ruthlessly with their public monuments. The literature of these enterprising mariners fared no better. A scene in one of Plautus's comedies (the *Poenulus*) is all of their language that has reached us on paper. Some fragments translated or adapted from the Phœnician historian Sanchoniathon by Philo of Byblos and the Greek translation of the work of the Carthaginian navigator Hanno, giving an account of his voyage along the west coast of Africa, are the chief remnants of a literature, which, at one time, must have been rich in books. These remnants, as well as the success of the Phœnician shipbuilders, explorers, miners, manufacturers, artisans, artists, architects, merchants and colonizers are a guarantee that they were a people well

¹ Taylor, *History of the Alphabet*, i., p. 210.

advanced in science and art and well provided with schools; as they dwelt mostly in cities, education among them, in all likelihood, was common. But as we have no remains of their school books, all we can know of their education are inferences from their culture as far as known to us. We shall, therefore, confine ourselves to briefly indicating what were the acquirements in science, in art, what were the principal obligations under which they laid the ancient classical world, and, therefore, us, also, the heirs of Greek and Roman civilization.

That they taught the Greeks their alphabet has already been mentioned. The Phœnicians also made known to the Greeks the Babylonian weights, measures and money system, if it can be so called. Through their mediation the Greeks learned much of the astronomy of the Chaldeans, including their knowledge of the ecliptic and the signs of the zodiac. With this went the Babylonian method of measuring circles and their arithmetic. The remains of their mines in the Ægean, in Greece, in Spain, even in England, prove that they taught Europe to explore and utilize the treasures of the earth. While they learned the manufacture of glass from the Egyptians and of fine textile work from the Babylonians, they served the cause of civilization by communicating the secrets of these arts to the Greeks. They also made them acquainted with the finest dyes known to antiquity, dyes, perhaps, unsurpassed to this day. There is hardly a land bordering on the Mediterranean that has not afforded proof of the skill of the Tyrians and Sidonians as potters and workers in metal. The decoration of the Phœnician sword handles and sheaths found at Mycenæ are the wonder of modern archæologists. As sculptors, too, and architects they exerted great influence on early Greece. While we know little of their own great buildings, one of the greatest structures of antiquity—a structure pronounced by modern architects a masterpiece of its kind—was their work. We refer to Solomon's temple. When we bring home to our minds how much intelligence was needed and how much knowledge must have been treasured up and made common property among the Tyrians and Sidonians to achieve such results, we will without difficulty reconstruct a rude picture of the activity of the Phœnician schools.

A short journey eastward will take us from the Canaanites of Tyre and Sidon to their neighbors and kinsmen, the Jews. Insignificant numerically, and confined throughout the greater part of its history to the country of the Jordan Valley, this people has affected the destinies of mankind as no other nation has done. Its literature has become the possession of the world, its sacred books, as a part of the Christian Scriptures, the guides of mankind. Its education,

therefore, merits our earnest attention, if for no other reason, because it has had such far-reaching results. But it is also interesting, as we hope to show, because of its unique character, its spirit and its aims.

If we ask when were the foundations of Jewish education laid, the Sacred Books tell us that its beginnings must have been coeval with the establishment of Israel as a nation in the land of promise. Moses, its leader and legislator, was also its historian and the founder of its literature. Instructed in the wisdom of the Egyptians he would have been false to himself and his people, had he failed to provide for the training of men able by their learning to continue the work of God, of which he has been the instrument. If we apply the test we have applied to the Babylonians and the Phœnicians and inquire how far back the art of writing can be traced in Palestine, the answer based on the latest research confirms the testimony of the Bible. True, the oldest monument written in the Hebrew language, that has come to light hitherto, the inscription on the tablet found in the tunnel which conveyed the water of the pool of Siloam into the city of Jerusalem, was engraved centuries after the days of Moses and Josue. It is ascribed by some to King Manasses, by others to Ezechias. But since the discovery of the Tell-el-Amarna correspondence in 1889, we have the proof that even before the return of the Israelites from Egypt their Canaanitish kinsmen, the tribes that in the 15th century ruled Jerusalem and the other cities of Palestine, practised the art of writing. They corresponded with the Pharaoh (Amenhotep IV.) in cuneiform writing, on clay tablets and in the Assyrian tongue. Even as we write we learn from the last volume of "*Records of the Past*," that Mr. Bliss has made new discoveries at the ancient city of Lachisch only a short distance from Jerusalem, that throw additional light on this question. He found a letter of instructions from the Egyptian government in which occurs the name of Zimrida, one of whose letters to the Pharaoh was found at Tell-el-Amarna. Thus, to use Prof. Sayce's words, the broken halves of a correspondence carried on before the Exodus, that had laid buried more than 4000 years, the one half on the banks of the Nile, the other in Canaan, have been recovered.¹ Sayce hopes that soon the archives of Lachich will be brought to light. At all events the finds at Tell-el-Amarna and Lachisch prove conclusively that even before Moses letter writing was practiced in the Holy Land. If we are asked why no Israelitish inscriptions have been found in Palestine we may point, in the first place to Moses' directions, when he ordered copies of the law to be made and set

¹ *Records of the Past*, New Series, vi., pp. xiii.-xiv.

up: "Thou shalt set up great stones, and shalt plaster them over with plaster, that thou mayest write on them all the words of the law." (Deut xxvii., 2, 3). Inscriptions on a surface of plaster ill resist the ravages of time and weather. In the next place we cannot see why the absence of inscriptions in Palestine proves the non-existence of the art of writing there any more than their absence in Phœnicia proves that the Canaanites did not know how to write.

We may, therefore, assume that from its beginnings as a nation, Israel was familiar with the art of writing. What was the script used by the early Hebrews we do not know, though the Tell-el-Amarna and Lachisch discoveries suggest the Assyrian cuneiform. It is certain, however, that they did not use what is now called the Hebrew alphabet. The Siloam inscription mentioned above is in Phœnician characters, *i.e.*, in an alphabet practically the same as the alphabet of the oldest Greek inscriptions. The close alliance of Solomon with Hiram, the Tyrian, and the Moabite stone (900 B.C.), make it all but certain that, already in Solomon's day and probably before, the Jews had adopted the Phœnician alphabet. At all events, the Jews must have had schools almost from their entrance into Palestine. Samuel, Scripture tell us, established prophet schools at Rama, Bethel, Jericho, and Gilgal. Alongside of these there were probably sacerdotal schools. The schools of the prophets, after flourishing for awhile, gradually disappeared. The prophet Amos is the last of the inspired writers that speaks of them.¹ The priest schools continued to exist to the Babylonian captivity, for Daniel and his companions, before they were chosen to be taught the learning and tongue of the Chaldeans, had been instructed in the science of their own people. During the dark days of the captivity, the Jewish sages did not forget the learning and wisdom of Moses and the prophets. By the waters of Babylon they cultivated the study of the Thorah or Law, and laid the foundation of the school of doctors that gave rise to the Babylonian Talmud. When Cyrus permitted the Jews to return to the land of Canaan and to rebuild Jerusalem, the man who was most active in shaping the destinies of the reviving city, was Esdras, a man no less distinguished for his learning than for his uprightness and godly life. To Esdras the Talmud ascribes a law enacting that as many schoolmasters as chose should be allowed to settle in any place. While it seems unlikely that such an ordinance was published, amid the trials and difficulties which beset the returned exiles it points to the fact that Esdras was a zealous advocate of education. Just before the rise of the Maccabees (175 B.C.), the wicked high priest Jason established in the holy city a Greek

¹ Döllinger, *Judenthum und Heidenthum*, p. 801.

gymnasium, which of course did not last very long. From I. Macc. i., 57, and Josephus, we learn that when Antiochus Epiphanes began to persecute the Jews, many private families owned the whole or a part of the Hebrew Bible. When the Maccabees, by their faith and daring, once more raised Israel to a place among the peoples of the earth, they and their advisers did not fail to provide for them the means of obtaining the instruction in the law, which henceforth was regarded by them as the most precious of all goods. Education became more and more organized, and when our Saviour was born every synagogue, we are told, had an elementary school connected with it.¹ Later still, and shortly before the destruction of Jerusalem, the high priest Joshua, the son of Gamaliel, in whom our readers will recognize the teacher of St. Paul, ordained that in every province and town schoolmasters (*chazans*) should be appointed who were to take charge of all the boys of the place after reaching the age of six or seven. Every place counting one hundred and twenty Jewish families was bound to appoint a teacher. Twenty-five boys constituted a class. If the number of pupils reached forty, the teacher was bidden to secure an assistant; if they reached fifty, the synagogue must appoint two teachers. Outside of Sparta and the little Greek town of Locri, this is the first instance of general compulsory education. Whether Spartan education can be called education in the sense in which we have used the word, may well be doubted. At all events, we here meet the striking fact, that neither the Athenian *Ecclesia* nor the Roman Senate nor yet the kings of the East, but the Jewish high priests, were among the first to lay upon their people the obligation to provide education for all their children.

Before entering into the details of Hebrew school education, it is necessary to state that girls were excluded from it. The Rabbis thought its training, which in its essence was legal, unsuited to the female mind. According to Deuteronomy, the father himself is to be the boy's first teacher. From his tenderest age, beginning at the latest with his fourth year, the boy was taught certain texts, which to this day are a part of the believing Jew's daily prayers. On occasion of a great Jewish feast the father told to his family the story of the great events the festival was to commemorate. In this way even before the boy went to school he knew the story of the Exodus, of Esther, of the captivity and the return. At six or seven began the young Hebrew's school-training. To understand this fully, we must bear in mind that several centuries before the birth of our Saviour, the Hebrew had become a dead language; the people spoke Aramæan, a cognate

¹ Edersheim, *Sketches of Social Life in the Time of Christ*, p. 133.

Semitic tongue, or in the cities, Greek, and under the Roman rule, Latin. But the language taught in the synagogue schools was Hebrew. From the Talmud we learn that there were little parchment rolls for children, containing the matter of their first reading lessons. They consisted of the *Shema* a part of the daily prayers of the Israelite comprising eighteen verses of the Pentateuch (Deut., vi., 4-9; xi., 13-21; Num., xv., 37-41), the *Hallel*, or song of praise including the 113th to the 118th Psalm, the history of the Creation to that of the Flood, and the first eight chapters of Leviticus. But before taking up this first reader, as we may call it, the child must be taught his letters. The method followed by the *chazan* was as follows. On a board he drew the letters¹ clearly and carefully, announcing the name simultaneously. When the child had thus learned his letters, the teacher took a manuscript, clearly and correctly written, and pointing with his finger or his stylus to a letter, asked its name. Spelling was the next step and then reading. The primer has been already described. As the object of all Hebrew education was religious, and to be a good Jew meant to be a rigid observer of the Thorah, or law, the boy's reading lessons, apart from the prayers mentioned, began with Leviticus followed by the rest of the Pentateuch. When he had mastered the five books of Moses, that is to say, when he had learned a great part thereof by heart, he passed to the Prophets, which among the Jewish doctors meant not only the greater and lesser prophets, but all the historical writings from Josue to the four books of the Kings, inclusive. The rest of the Old Testament, collectively called the Hagiographa, was taken up next and completed the pupil's elementary Biblical course. Its analysis will show that it included not only religious instruction and liturgy, but the national history and the ethics of the Sapiential Books, not only prose but poetry, the sublimest poetry ever written. At the age of ten, in conjunction with his scriptural studies the Hebrew scholar took up the *Mischnah* or second law, which was an exposition of the Thorah. The *Mischnah* occupied his time till he reached his fifteenth year, when his elementary education was completed. Had the youth shown unusual talent, he now entered the *Beth-Hammedrash* or academy, where he studied the Talmud, or rather the *Ghemara*, that part of the Talmud not comprised in the *Mischnah*. As the *Mischnah* is a commentary on the Thorah, so the *Ghemara* is a commentary on the *Mischnah*. Thus the young Hebrew's entire education from the time when his father first taught him the *Shema* to the day he left the *Beth-Hammedrash* was one long study of the law and the Prophets. To

¹ At the period of which we are now treating, the square Hebrew had already come into use.

the Jew the one important thing to learn was the law. A story from the Talmud illustrates the views of the Rabbis on this point. A young Rabbi, came to his uncle, and asked him, whether having mastered the Thorah he might not now study the wisdom of the Greeks. The uncle referred him to Josue i., 8. "Thou shalt meditate thereon (the law) day and night," bidding him obey this precept first, and then devote the rest of his time to Greek wisdom. How surely and intensely such an education must divide the Jew from the Gentile need not be pointed out; how deeply it must instil into him the ideas, the usages, and the hopes of his fathers is equally evident.

Writing was far less general among the Jews than reading. Still, many passages in Deuteronomy show that even when that book was composed, writing must not have been uncommon. Josue speaks of a book of Jasher and a description of Palestine as existing in his lifetime. Josephus speaks of forgeries, and forgeries presuppose a thorough knowledge of writing. In our Lord's day the writing materials in use among the Jews were the same as those of the Greeks and Romans, viz.: papyrus, parchment and for memoranda, tablets of wax. On papyrus and parchment they wrote with reed quills in black, red, or even golden ink.

As the Jews derived their weights and measures from the Babylonians, they must have learned arithmetic from the same source. Whether it was taught in the synagogue schools seems uncertain. It is true, it was declared to be profanation to make use of one's learning for gain, but that did not always prevent the learned from turning an honest penny by means of their acquirements. So much is certain—if the Jewish boy did not learn to compute in the synagogue school he none the less became a ready reckoner.

The prohibition to make images contained in the Decalogue, according to the interpretation of the Jewish sages, was fatal to the development of the arts of sculpture and painting among their people. Even architecture was in a backward state. Solomon's temple was planned and decorated by Phœnician architects and artists. "In vain," says Babelon,¹ "have many archæologists during the last sixty years made efforts to discover in Palestine, or in the other regions of southern Syria, and even in the heart of Arabia, traces of an art which might have flourished in those regions before the arrival of the Greeks and Romans."

In view of the strong movement developed of late, both here and in Europe, in favor of manual and gymnastic instruction, it is worth while to state that every Jew was obliged to learn a trade or business, and that the rabbis strongly advised parents to teach their children swimming.

¹ Babelon, *Manual of Oriental Antiquities*, p. 230.

The discipline of the Jewish schools was carefully regulated by the priestly authorities. While corporal punishment was considered necessary, the teacher was warned to be moderate when he had recourse to it. In earlier times, parents were admonished that, to spare the rod was to spoil the child; at the beginning of our era, the *chazans* of the synagogue schools, were forbidden the use of the rod; instead of it, they applied the strap. Many other wise rules were laid down for the guidance of the teachers, and show that the schools were managed in a kind and sympathetic spirit. The men who suggested them did not lack correct insight into child nature. The teacher, for example, was cautioned not to prefer one child to another, and never to discourage a scholar. Patience was to be one of the *chazan's* fundamental virtues. Should the child not understand his explanations, the instruction was to be repeated in clearer terms, if possible. Beside justice and patience, truthfulness and sincerity were to mark his rule. No threats were to be made, no rewards promised, unless the teacher intended to carry out his threats and promises. Lastly, the morality of the school was to be carefully guarded. Bad company, especially, was sternly denounced and proscribed. Surely, these laws were excellent; and, if faithfully applied in the government of the school, were well fitted to secure a system of discipline both kind and effective.

Two features impress us, on looking back at this sketch of Jewish education. In the first place its spirit was in direct contrast to the ideas that ruled the Egyptian and the Babylonian schools. In the latter, utilitarianism was the alpha and omega of the system. The Jewish schools were built up on one idea—to rear up a chosen people for God, and to divide it from the gentiles. In the second place, it is, indeed, remarkable, that this people when its sceptre had departed from Juda, should have imposed schooling on its children as an obligation.

CHARLES G. HERBERMANN, L.L.D.

ON THE OBSCURITY OF FAITH.

FAITH, says St. Paul, is the evidence of things that appear not. It has always a certain obscurity belonging to it, and which is a part of its essence. Whence does this obscurity arise? Is it always in the material object of our faith, so that it is impossible to make an act of faith respecting that which is already clearly evident to us on grounds of reason? Or does the obscurity of faith arise from the formal object or motive of our faith, in that the reception of some statement, on the authority of another, in itself throws a sort of mist around the object on which faith is exercised, even though it may be in itself on other grounds evident to our minds? Or, to put the same question in another shape, can we really accept, on the authority of another, that which we know to be true by reason of the evidence that it itself contains of its own truth?

In order to answer this question satisfactorily, we must first of all call to mind the distinction between human and divine faith. In human faith we accept some statement on the authority of man, who may deceive or be deceived. In divine faith we accept it on the authority of God, who can neither deceive nor be deceived. The cases, accordingly, do not stand on the same footing. We will therefore consider them separately. We will begin with human faith. The question before us is whether we can accept, on the authority of others, that which we know to be true quite independently of their authority? Can we put aside the certainty that we have already attained and accept the statement anew, as if our mind was still undetermined? I have before me a mathematical problem that I have just worked out with the greatest care. Each step, from beginning to end, is certain with mathematical certainty. From first to last, I have an absolute certainty of the perfect accuracy of the calculation, so that the conclusion is quite as well established as any one of the axioms from which it starts. No further and different mode of working it out would add anything, even to the positive side of the certainty that I have already, as to the correctness of the answer. I now turn to the book from which the problem was taken, and I find that the answer there given is identical with the answer at which I had myself arrived by my own method of proof. Can I now accept the answer simply on the authority of the writer of the book? or does my previous certainty on other grounds preclude me from doing so?

As long as I have before my mind, clear and distinct, the various

steps of the process of argument by which I arrived at my conclusion, my mind rests perfectly satisfied. I have the highest natural certainty. Any further proof of the conclusion is absolutely superfluous, and if I am asked to believe the correctness of it because of the authority of the compiler of the book, I answer that I am quite willing to do so, but that his authority adds nothing to the strength of my conviction. It offers me a certainty of a lower order, which is of no use to me. The moral certainty that the answer given in the book is correct is only moral certainty, and in the presence of mathematical certainty it is absolutely useless. It adds nothing which is not already found in mathematical certainty. It in no way strengthens the firmness of assent. My acceptance of the conclusion on the ground of my own previous process of argument swallows up the acceptance of it on the ground of the answer in the book, without deriving any advantage from it, just as the kine in Joseph's dream swallowed up their fellows without becoming any the fatter for the addition. If I am to accept the conclusion on this lower ground, I can only do so by prescind- ing from, and putting away from my mental vision, by mental effort, the more trustworthy ground which has already secured my firm assent to it. But as long as the previous process is in possession of the intellectual field there is no room for the feebler claimant who desires to share it.

But now let us suppose the lapse of a few days or weeks, during which the problem has been entirely absent from my thoughts. When I return to it again my recollection of it has become hazy and indistinct. I do not remember how I arrived at the conclusion, and I am ready to admit the possibility of error in my calculations. With this element of uncertainty as to the various steps that have lead up to the conclusion, there has come in a sort of faint uncertainty as to the conclusion itself, and therefore my mathematical certainty as to the correctness of the conclusion has disappeared also. I am indeed almost sure that I made no mistake, but the whole matter has so faded away from my thoughts that I could not categorically assert it. I could only say that as far as I can recollect my calculations were quite correct. My mathematical certainty has faded away into a strong probability. Perhaps I may not even have any positive doubt as to the accuracy of my solution, but at least I have to admit that the subject has so faded from my memory that it is not absolutely impossible that I may have made some mistake. I am no longer forced to accept it as true on pain of forfeiting my right to be called a rational being, as I had felt was the case at the time that I argued it out.

Now, when once this change has taken place, when once I admit a bare possibility of error on my part, when the truth of the conclu-

sion, and the correctness of the various steps that led up to it, are no longer so luminously present to my mind as to constitute their own irrefragable evidence, when the mathematical certainty has disappeared and given place to a high degree of probability (even though that probability should approximate to moral certainty), then the difficulty of accepting the conclusion, on the ground that it is given in the book, disappears at once. There is no longer present that higher kind of certainty that swallowed up the lower kind. The moral certainty has now a chance of occupying the mental field, as now its only rival is the feebler condition of a strong probability. I can now accept the conclusion on the ground of my confidence in the author of the book. I am morally certain that the answers given by him are correct. I accept his solution on grounds of human faith.

We thus perceive that an element of uncertainty, however slight, is necessary to the practical exercise of human faith. We may, indeed, by an exercise of our will, abstract our minds from our previous acceptance of some statement we have already proved to be certainly true on other grounds; we can think ourselves away from the previous processes and their result. But such a state of mind is an unnatural and unreal one, and in practice we should never trouble ourselves about a proof from the authority of others where we had under our feet the sure ground of mediate or immediate evidence. We can only walk by human faith when we cannot walk by sight. We can, if we choose, carry a farthing rushlight as we walk in the clear light of the noonday sun, but we cannot be said to guide our footsteps thereby until some thick fog, overspreading the sky, hides from us the sun's light. The obscurity is a necessary condition to our practical employment of the lamp.

Or to take another illustration which has, perhaps, a more immediate bearing on the question before us. Let us suppose that some eccentric philosopher were to collect together a number of learned authorities who have laid down directly or indirectly, explicitly or implicitly, in their writings that "The whole is greater than the part," and were to ask us to assent to this proposition on their authority, urging that although it is true that this proposition may be proved on other grounds, yet that we shall have a greater confidence in its truth when we hear the wisest of mankind expressing their adherence to it. He does not, indeed, deny its absolute and metaphysical certitude on *a priori* grounds, but he urges that it is well to have several strings to our bow, and that although there are no steps in certitude, as regards the absence of doubt, yet that it is generally allowed that, on the positive side, it does admit of degrees, and that every fresh motive of acceptance adds to

the firmness of our adhesion. What answer should we make to such a one? We should tell him that the lower kinds of certitude do indeed admit of degree on their positive side, that we can add to the firmness of our adhesion to some fact that we learn from travellers, even after we have arrived at moral certainty as to the correctness of the report, and that, as traveller after traveller bears witness to its truth, we go on adding continually somewhat to the firmness with which we cling to it. But we should remind him that this is not at all the case with those truths that are not learned by experience, but are founded on the very nature of things. These latter truths, as soon as they are grasped, occupy the whole mental field as belonging to them of right, and resent the feeble effort of any lower kind of certitude to effect an entrance. Moral certitude, founded on external testimony, is as superfluous to one whose appetite for certainty is satisfied to the full by metaphysical or mathematical certainty, as is some kind of inferior food to one who is perfectly satisfied with the solid and substantial food which he knows to be exactly adapted to his wants, and which his nature adopts and assimilates as a part of his very nature itself. When we are enjoying the full brightness of the noonday sun, the light of a series of farthing rushlights adds not a whit to the clearness of our vision.

Such is our answer, as regards human faith, to the question whether it is possible for us to accept on the authority of another what we already know to be true from the evidence of our mental sight.

We now turn from human to divine faith. Does the same rule hold good in this case also? Is our acceptance of truths on the ground of Divine faith limited to those which are in themselves obscure, to the exclusion of those which are immediately or mediately evident to human reason? Is it possible that I should make an act of faith in the propositions of Euclid, supposing that God should reveal them to me? Or does the absolute certainty, which already occupies the field of vision exclude any further acceptance on other grounds? Is sight compatible with faith? Is the scientific knowledge of some fact compatible with a belief in it as the object of Divine revelation? This is an important question, and one from which many far-reaching consequences follow.

First of all we must be careful to have clearly before our minds the exact point in question. All Catholic theologians admit that the habit of faith, extending as it does to all the dogmas of faith, can coexist with a scientific knowledge of one or other of these dogmas. When I prove on grounds of natural reason the existence of God, I do not thereby lose my habitual faith in Him. It would be ridiculous to suppose that the infused habit of faith

was diminished in our souls by the clear proof from reason of one or other of the statements of the Nicene Creed, or that henceforth we believed them with a weaker faith, and that we were, therefore, poorer in spiritual gifts. Our faith at least remains as perfect as before. The mere habit of faith induces no obscurity, and the scientific knowledge, involving as it does, a perfect clearness in the scientific act of assent, in no way interferes with it.

In the same way it is universally agreed that an act of faith is, respecting anything, perfectly compatible with habitual scientific knowledge concerning it. When a man makes an act of faith in God, it in no way impairs the strength and certainty of the knowledge of God which he had previously acquired by the use of his reason. A mere habitual knowledge respecting anything does not involve any actual mental operation; and, therefore, cannot interfere with the act of faith respecting it.

The question therefore narrows itself to this: Is an act of faith incompatible with an actual knowledge of the same truth? If I have an actual knowledge, based on reason, of a future life, can I in spite of the certainty of that knowledge, make an act of faith in its reality, accepting it, not as a fact scientifically proved, but as a dogma of faith, revealed to me by the Divine Authority? We have seen that in the case of human faith its exercise is precluded by scientific knowledge. The mental field is already occupied, being determined to an intellectual assent by the evidence of reason, and is incapable of any further determination by the fresh motive of authority. Is the same true when the intervening authority is the authority of God?

It seems at first sight that when we are once so perfectly convinced of any proposition that there is left no sort of room for doubt, the intellectual field is already occupied, and it is impossible to put aside our certainty respecting the truth that has become a part of our mental furniture in order to admit it afresh under a new sanction. Or, to put it in another way, faith always implies a certain obscurity. How then can it be exercised on a proposition which is already evident to our minds, and respecting which there can be no possible obscurity? In confirmation of this view the authority of Holy Scripture is quoted, for St. Paul defines faith as the evidence of things that appear not. How then can we reconcile with his words the theory that faith is the evidence of things that are already evident on grounds of reason? There is no restriction in the words of St. Paul as to the source whence the previous evidence is to be derived, and we must, therefore, suppose that he excludes all previous concurrent proof from reason of truths which we accept on the authority of God. In the same sense Augustine asks: "What is faith?" and answers that it is the believing what

we see not. All evidence, it is further urged by the advocates of this opinion, renders the mind incapable of being influenced by external testimony, as every-day experience bears witness.

All this is true enough, in so far as it is taken to prove that faith excludes the idea of perfect clearness from its object when regarded as an object of faith. The truth in which we believe must be obscure in respect to our motive in believing it. But does it follow that it is obscure under any other aspect? Let us examine the process that actually takes place in our minds.

We have before us some proposition that is as clear to us as the daylight. It may be some mathematical truth, which it is impossible for us to think away from our minds, or some first principle which has a certainty no less absolute. I have not the power to doubt of the proposition before me any more than to doubt of my own existence. This same truth I now find stated in Holy Scripture, or in the dogmatic and infallible decrees of some council of the Church. Can I make an act of faith in it? or am I precluded from doing so by the perfect clearness of the evidence for it, and the consequent certainty with which truth is already presented to my mind?

Now, if faith and reason occupied the same sphere of thought, the evidence afforded by reason would necessarily render impossible the obscurity required by faith. The field of thought already determined by the evidence before it would be incapable of any further determination. The certainty derived from the authority of God would be anticipated by the superior certainty derived from the clearness of actual sight; or, if it were the superior certainty of the two, would dislodge it, and cause it to disappear. The two motives of assent, as motives of one and the same mental process, could not coexist in the same region of thought, since they are different from their very nature, and the difference is one that constitutes a different species of act. Some have, indeed, imagined that the two acts, the act of faith and the act of reason, could be combined in one and the same act. But what sort of an act would this be? It could not be a merely natural act, since it partakes of the nature of faith. It could not be a purely supernatural act, since it is partly based on reason. It could not be partly natural and partly supernatural, for in that case it would combine the perfections of the two acts that are supposed to be united in it. It would have the supernaturality of the act of faith and the clearness of the act of natural reason. There would thus be present to it a kind of supernatural self-evidence, which would be quite incompatible with the obscurity of faith. Moreover, this double act would be at the same time a free and a necessary act; free by reason of the freedom that is the result of the obscurity of faith, and necessary

on account of its being a proposition the truth of which is self-evident.

But the impossibility of combining an act of faith and an act of reason in one and the same mental act does not prevent us from making an act of faith respecting some proposition which is already evident to us on grounds of reason. For the two acts are not only different acts, but they do not belong to the same order. They cannot interfere with each other, or come into collision, for the very simple reason that they do not claim possession of the same field. You might as well expect a collision between a railway train running along the ground, and a balloon that is floating in the air. The act of reason is in the natural, and the act of faith in the supernatural order, and therefore they can coexist, not exactly side by side, but one above the other,—the act of faith on the higher, and the act of reason on the lower level. The one does not swallow up the other, and the one does not support the other, as the act of faith is in a sphere altogether removed above the sphere of reason. Yet, we may say that the one and the other act, alike, support the proposition which is the subject-matter of both of them. The act of faith by which we assent to it on God's authority is its support in the supernatural order of faith, and the act of reason by which we assent to it on account of its being evidently true in itself is its support in the natural order. If we should find out that some proposition that we have believed to be divinely revealed, as well as naturally evident, does not after all form a part of God's revelation, we have still the natural evidence to fall back upon; and if on the other hand such a proposition which we had regarded as naturally evident proves, after all, to be certain only with a lower degree of certainty, this does not derogate from our firmness of assent to the act of supernatural faith by which we assent to it on the divine authority.

It is not difficult, now that we have thus cleared the ground, to see what kind of obscurity is required in divine faith. In human faith the material object of our faith must be in itself in some way obscure, because if the proposition we are asked to accept is evident to us, or indeed is certain with any kind of true certainty, our mental field is already occupied, and the new motive for assent can find no room for admission, and is a superfluous and unnecessary addition to the grounds for assent which are already in possession. For human authority can never give us a certainty at all to be compared with the certainty that is the result of demonstration and evidence. It can give at most only moral certainty, instead of the metaphysical certainty which comes of deductive arguments from general principles, or which is inherent in those principles themselves. The only addition that human authority can make to

previous certainty is that it can, in the case of moral certainty, add a fresh support to the structure which can already stand on the support by which it is already borne up. But where the certainty is one of a higher kind, it is absolutely futile to recur for a moment to the illustration that I have given above; it is clear that so long as I am absolutely sure that I have worked out the problem with perfect accuracy, I acquire no further certainty from the fact that the same solution is given in the book. It is not until there enters into my mind at least some faint doubt as to my own perfect accuracy throughout, and I am inclined to think that it is just possible that I may have made a mistake somewhere, that I can rest in any way on the authority of the book, or accept it because it is so laid down in its pages. It is not until my recollection of my process of proof becomes hazy and indistinct, and my confidence in the accuracy of my result to some extent shaken, that I am able to accept the result no longer on the strength of my own calculations, but because of my confidence in the accuracy of the author of the book, and in the consequent accuracy of the answers there set down. The absolute and unhesitating certainty which was based on my own working out of the problem must have retired from the field before its feebler rival can take possession of it. They cannot both be at the same time the primary and determining motive of my assent.

But the case of divine faith rests on an entirely different footing. Whence arises the obscurity in the act of faith? Simply from this, that the assent of faith is based on the divine testimony, and all testimony is in itself something not evident and obscure. Everything that comes to us second-hand is necessarily less clear than that to which our mental powers attain directly. We receive it hidden from us by a veil, and this veil consists in the testimony of him who communicates it to us. The thickness of the veil, and of the consequent obscurity, depends partly on the knowledge that we possess of him who is the source of the communication and partly on the means that he employs to impart it. Now, in the case of the knowledge that we have by divine faith, the source of our information is One whom no man hath seen or can see, Who dwells in the inaccessible light of His divine majesty, and is known to us as long as we inhabit mortal bodies, only through a glass after a dark manner. If He who speaks is thus hidden from us, it must needs be that there hangs around His utterances an obscurity that will continue until we shall see Him face to face, and know as we are known. To this first ground of obscurity in the assent of faith another is added. Not only do they proceed from One who is hidden from our sight, but the manner in which He imparts them to us is in itself obscure. They

come to us in general through some human agency. God does not talk with us as he did with Abraham—as a man talketh with his friend. He has certain established and authoritative media of communication, and before we can accept some proposition as one of faith, we have to be sure of the authority of the medium. We have proposed to us some doctrine, and are invited to make an act of faith in it, but we have to go through the preliminary process of ascertaining whether it is one that God has really revealed to us through His Church, or by some other channel through which we already know that He is wont to speak. And, when we have ascertained the fact, there results a further obscurity imparted to the communication made from the channel through which it is made. Utterances reaching us through such a channel come to us not second-hand, but third-hand. However trustworthy the medium, however certain we are that God has spoken, and that His words are placed before us as He spoke them, yet the fact that they are reported to us through another's agency increases the obscurity, even while it in no way interferes with our perfect confidence in their divine truth. Hence, when God reveals any truth to us to be believed on His authority, He thereby invests it with a circumambient mist, as far as regards our supernatural acceptance of it. We are free to take it or reject it, and if we reject it and disallow the binding force of the authority of Him who vouches for it, we cannot be charged with violating thereby our rational nature, or forfeiting our claim to be regarded as reasonable men. It is true that in its final consequences any adherence to error is at variance with our rational nature, but in rejecting the divine authority on some detailed proposition we cannot be regarded as directly and immediately sinning against the light of reason. The formal motive of faith is in itself obscure, and it creates of itself its own obscurity, and does not require it as a previous condition in the material object. Human faith presupposes obscurity in its material object, and without it is incapable of energizing; whereas, divine faith supplies the obscurity from its own nature, and is quite indifferent to the previous character of its material object as regards its evidence or obscurity, so long as it can claim for it a true moral certainty on grounds of reason.

When St. Paul says that faith is the evidence or proof of things that appear not, he means that faith itself, in virtue of its inherent obscurity, causes those things which were evident as objects of human reason to become obscure as the objects of divine faith. So far from its following, from the fact of their supernatural evidentness that they cannot be evident naturally, there is no single truth of divine revelation about which we may not make an act of faith, however clear and unmistakable may be its evidentness in the

natural order. Or, again, St. Paul may be explained as meaning that faith is the evidence or proof of a number of truths that are not evident on grounds of natural reason, and that it thus makes known to us mysteries altogether beyond the grasp of unassisted nature, and claims our undoubting assent to propositions respecting which we otherwise could never attain to any well-founded certitude.

In the same way, when St. Augustine says that faith consists in believing what we do not see, we may explain his words as meaning that it consists in believing that which is not evident to us in the supernatural order, or that he lays this down as the test of faith that it is ready to believe not only things that are clear to us on other grounds, but also those that are obscure, so that we could not attain to any certainty regarding them on grounds of natural reason apart from divine revelation.

To sum up: We can make an act of faith not only respecting things over which there hangs some sort of obscurity in the natural order, so that apart from Revelation we should be at fault to know whether they are true or not, but also respecting things perfectly clear and evident, so that there can be no doubt whatever of their truth, quite apart from all revelation whatever. The reason of this is that faith and reason occupy different spheres, and that a proposition may be as evident as the day in the lower, or the order of reason, and at the same time may be obscure and veiled in the higher region of supernatural faith. The obscurity of faith does not mean that its object must be obscure before faith comes to shed its light upon it, but that that very light is, from its very nature, a light which carries with it an obscurity of its own in its own order. We may with our natural eyes be able to discern clearly certain objects around us. There may be no sort of dimness or obscurity about them. But now a glass is put into our hand through which we are asked to survey the scene. The glass carries with it a certain dimness, affecting all things seen through it. But when we employ it we are able to discern a number of objects that before we saw not at all, and in the objects that were previously within the range of our unassisted vision we are now able (spite of the dimness that it carries with it) to perceive much that we did not observe in them previously. So great is the change that we are able to say with truth, "Whereas I was blind, now I see," and though there is a dimness round this new sight, yet it is a dimness which gives us quite a superior sort of knowledge compared with the clearest vision that we enjoyed before. Our knowledge of objects that our eyes distinctly saw is in no way an anticipation of our present and far deeper insight into them. The one does not hinder the other, or render it nugatory. Our higher method of re-

garding all things around us does not in any way depend on that lower method which consists in an unassisted vision. When we use the glass which has been put in our hand from above, it makes no difference whether the objects it manifests to us were clearly known before, or were wrapped in a previous obscurity, since it carries with it its own authority, as the obscurity that accompanies it is compatible with a perfect clearness in the objects seen when perceived by the natural sight, since it is an obscurity that arises from the very nature of the instrument, and not from any characteristic pertaining to those objects in themselves.

But there is still another question to be answered, and one which will aid us not a little to the clear understanding of the matter under discussion. If faith is compatible with that which is evident in the natural order, is it similarly compatible with the clearness of supernatural evidentness? If God reveals to us some truth in such a way that we have an actual vision of it in the supernatural order can we any longer make an act of faith respecting it? When St. John the Evangelist saw in an ecstasy the heavenly Jerusalem, and knew that it was God who was showing him the sights and causing him to hear the sounds of the city of God, was it possible for him any longer to exercise the virtue of faith as regards the scene of which an intellectual vision had been vouchsafed him? When our Lord revealed to St. Bridget the details of His Sacred Passion, so that she saw them before her as clearly as if she herself had been present on Calvary, was an act of faith still possible to her, or had faith already passed into sight? Such visions as these, in which God reveals to His Saints what is hidden from the world in general, carry with them their own supernatural evidence, and consequently supernatural certitude respecting them. We should therefore expect them to be at least as certain as the knowledge of faith. Faith, therefore, becomes superfluous on the principles already laid down. The supernatural field of the human intellect is occupied by a supernatural certitude, and there is no further room for the certitude of faith. It is not as in the former case, where the certitude resulting from the evidence of reason was a natural certitude, belonging to a different region from the supernatural region of faith; for here both kinds of certitude claim a place in the same supernatural region, and as evidence is a stronger motive for assent than any other method of proof in one and the same order, it would follow that the firmness of adherence by reason of the revelation by sight would be greater than the firmness of adherence by reason of the dim and obscure revelation which is apprehended by faith, and when once the former was in possession there would be no

room left for the latter. At least one or other of the two acts would be superfluous. Faith would add no further certainty, and it seems, therefore, unlikely that God would move to an act of faith one who had already received some divine truth by an act of intellectual sight. Yet this collision between the two acts, and the incompatibility of the two motives of assent, would only last as long as the actual vision was clearly present to the intellect. When once it had to some extent faded away, or become dim and indistinct, faith would once more resume its activity. The habit of faith had always been there, and the act of faith had always been there, at least virtually, and it had simply been for a time restrained from energizing on account of the presence of the actual vision, which occupied the field of thought.

From this we pass naturally to another question, viz., whether faith is compatible with the beatific vision. Here there is no room for any sort of doubt so long as we are speaking of the act of faith. Faith is the evidence of things which appear not, and, therefore, when the object of our apprehension appears before us in the perfect brightness and clearness of the vision of God, faith is not only superfluous, but impossible. Hence, St. Paul contrasts our present knowledge by the light of faith with our future knowledge, when we are in the immediate presence of God. "We see now through a glass in a dark manner, but then face to face. Now I know in part, but then I shall know even as I am known. When that which is perfect is come, then that which is in part shall be done away."—1 Cor., xiii., 10, 12. This is the real meaning of St. Augustine's words quoted above. The contrast that he, and indeed all the Fathers of the Church, draw between faith and sight is not between the supernatural act of divine faith and the natural act of intellectual vision, but between the obscurity of faith in this world and the perfect clearness of the supernatural vision in the world to come.

But though it is impossible for one who has the beatific vision present to his sight to make an act of faith, it is quite possible that the habit or light of faith may still remain, even though precluded from passing into act by the superior certainty derived from sight. When St. Paul was rapt into the third heaven and beheld (as St. Thomas teaches us, 2, 2, 175, 3, Q. de Ver., art. 2) the very divine essence, he did not hereby lose the habit of faith. In the saints in heaven there may remain that supernatural light that we call the habit of faith, although there is now no room for its exercise. It is swallowed up in the superior brightness of the beatific vision. But if we could imagine (supposing it were possible) the suspension for a time, in the case of one of the saints in heaven,

of the actual vision of God, there is no reason why he should not in that case make an act of faith by reason of the habit of faith, which would then find the field of thought in the supernatural order no longer occupied.

We cannot conclude this paper without saying a word as to whether the virtue of faith were possible to our Blessed Lord while He was on earth. If the habit of faith is not necessarily excluded from the blessed in heaven, in whom there is no kind of imperfection, it might seem that much more could it be present in our Lord; during the time that He was clothed with all human imperfections, with the sole exception of sin and all that appertains to sin. The question is not whether the act of faith was possible to our Lord; for it is clear that as He was ever in possession of the beatific vision, and His sacred humanity ever gazed on the divine essence by reason of the intimate union with His divine nature, any exercise of faith was precluded by the clearness of perfect sight. But was the habit or light of faith dwelling within Him, and was it compatible with His divinity? To this we answer with all theologians that it most certainly was impossible that even habitual faith should be present in the Son of God. For faith implies the capacity to accept, on extrinsic authority, some truth revealed to us by another. There is no contradiction in supposing such acceptance in one of the blessed in heaven, but here is an absolute contradiction in making the same supposition in the case of our Lord. He, from the first moment of His conception in the womb of the Blessed Virgin Mary, had ever present to Him, by reason of the hypostatic union, the divine essence. The extrinsic authority required by faith could not be present in Him in whom there dwelt all the fulness of the Godhead. There could not be in his case the obscurity which is of the essence of faith. We must, therefore, believe that neither in act nor in habit was the virtue of faith possible to the Son of God.

At the same time, whatever of perfection is to be found in faith was of necessity to be found in His human nature. In faith two acts concur, and in the habit of faith two different habits are combined. The one is in the intellect, the other in the will. The one is an infused intellectual disposition, and is the principle which elicits the assent of faith. The other is supernatural disposition of the will, which elicits the necessary loyalty and readiness to believe. Now, the assent of faith was absolutely impossible in our Lord, and consequently the actual and efficacious will which moves the intellect to believe was also impossible. But it is quite a different case with that disposition of the will that renders him in whom it is found full of that loyal obedience, that is ready to accept on God's

authority whatever He may reveal, if so be its possessor is placed in a condition where such an obedience of faith should be possible to him. In such a disposition no imperfection is implied, since it merely disposes the will to be ready to carry out any work imposed upon it, even though the particular work in question is one that it will never have to perform. In this sense the virtue of mercy was present in our first parents in the Garden of Eden, though they had no possible object on whom they could have mercy. In this sense we may say that our Lord had the virtue of faith in that in His human will was present everything that is required for the obedience or the merit of faith. "Whatever perfection," says St. Thomas (Pars 38, Q. 7, art. G.), "is to be found in human faith and hope exists much more perfectly in Christ, but the defects which are implied in faith and hope are necessarily absent in Him."

R. F. CLARKE, S. J.

COMMON-SENSE OBJECTIONS TO THE POSTULATES AND CONCLUSIONS OF EXTREME EVOLUTIONISTS.

THE theory of evolution has had a marked effect upon the current of the world's thought. It has in no small degree diverted science from its true mission of discovering the unknown laws of nature, by occupying its time with a labored attempt to verify a foregone conclusion that one supreme law of development reigns throughout both the mental and the material world; it has turned in a new direction the search for the true basis of morality; and it has produced in many minds a vague impression that it has somehow undermined the foundations of revealed religion. It has met, too, with a surprisingly ready reception. Many seem to have been quite willing for it to sweep them away from their old moorings, without so much as once asking how much of actual undisputed fact is claimed as the ground for this change in the world's way of thinking.

If they had put this question to themselves, they would have been surprised perhaps at the answer. For it is that the starting-point of the attempt to explain man's origin, development, and destiny upon the theory of evolution is not a proved fact at all, but the yet unproved hypothesis that some species of living beings have been developed from other species. It is true that the idea of such a development was first suggested, and has since been made apparently more plausible, by the observation and study of admitted facts. But still it has never passed from the domain of theory into that of undisputed truth. The too willing converts to extreme views on the subject of evolution have not waited for it to do so. They have hastened to proclaim the hypothesis of such a probable development to be the most fruitful of all scientific thoughts, and have proceeded at once to build upon it an inverted pyramid of the most extravagant proportions. They declare it to be the only sure clue to the past history, the true meaning, and the future destiny of the universe, including man and all his works—material, mental, and moral.

Now, if this probability were regarded merely as a matter for discussion among scientists, we should not have a word to say of it. But when those who take such extreme views of its importance ask us to accept their initial assumption as an indubitable truth before it is shown to be such; when their assertion that it puts revelation in irreconcilable conflict with science, is appealed to in

justification of the crude thinking and shallow talk now so common on that subject; when they are industriously teaching a false and most pernicious theory of morals as one of the doctrines of evolution, under the pretext that it is a branch of "popular science"; when they go thus far, it is time to examine the claims they make for their one all-important probability. By all means let it have whatever scientific value they may justly claim for it. But when it is made the basis of a theory that disposes of us bodily, mentally, and spiritually, both now and hereafter, it becomes to each of us a personal matter, and it is our right and our duty to question this unlimited extension of its reach.

This is all we propose to do. Therefore we wish it to be understood that when we speak of the evolutionist we mean the extremist, who would make his theory account for everything that is knowable of the past history and the present order of the universe, from the first movement among the particles of mist in the primeval chaos down to the latest product, intellectual or moral, of modern civilization. We shall aim to show that in attempting to do so he is compelled to make assumptions that are obviously contradictory, that require unquestioning submission to the dogmatism of science, and that for the hitherto generally accepted explanation of the mysteries connected with the origin and present order of the universe, substitute in the most arbitrary manner other explanations which make those mysteries even still more profound and unfathomable. We shall present none but the simplest considerations, such as can be readily understood by those who have no special knowledge of science. For we write for that class of readers; and our object is to show them that if in any quarter faith in the Christian genesis has been shaken by the new theory, it is because the advocates of the latter have not been as candid in admitting the weakness of its foundations as they have been industrious in making known the extreme consequences they deduce from it.

In pointing out the assumptions we have just referred to we may conveniently divide the work of evolution into two epochs. The first extends from "the beginning" to the time when higher forms of sentient life, endowed with consciousness, with more or less of intelligence, and with the faculty of will, are said to have at length been developed from lower forms that were not thus endowed. The second extends from this point in the progress of evolution down to the present time.

Now as to the first, it must be admitted that any attempt, no matter upon what principles, to account for the origin of man or of the universe, must always take us back to a region of inscrutable mysteries. The Christian explanation of these mysteries begins by affirming that the material world was created out of

nothing by an omnipotent personal Intelligence, and that in creating man the same Intelligence joined together a material and an immaterial substance—a body and a soul. This explanation accords with what is called the spiritualistic philosophy, of which we need state only a single postulate. It is that the psychical element in man's dual nature is a separate spiritual entity, endowed with certain faculties of its own, such, for instance, as the faculties of loving and of willing. It exercises its faculties spontaneously, in explanation of which term it will suffice here to say that it is not determined to activity solely by the influence of outside causes. Its operations are not the product of anything material in its environment, nor is their quality or character determined altogether by the influence of that environment. Sensible things do not impose upon the mind its way of thinking; on the contrary, it has its own innate way of thinking, which sensible things can neither change nor wholly control. Neither the intellect nor the will of man is a mere irresponsible creature of circumstances—helpless and passive under the moulding influence of heredity and environment.

But this explanation and this philosophy are rejected by both the schools, the more and the less materialistic, into which extremists may be divided. To the former belong those evolutionists who hold that there is nothing in the universe but matter and force, and who attribute all the works of nature to these two factors alone. They deny the existence of any such thing as immaterial substance, and trace every phenomenon in the world of mind back to a source in the world of matter. They repudiate the Christian genesis as unscientific, upon the ground that it first postulates the existence and action of a Being who is not discoverable by any process known to science, and then assumes farther that He has united to the body of man an immaterial substance, of which again there is no trace that science can detect. Even admitting that such a Being may have been the first cause of all things, and that He may have appointed for every living thing a particular final destiny which its environment fits it to attain, still science cannot admit these possible designs on His part as an element in any of its investigations. For it has long since discarded the doctrine of "final causes." In investigating scientifically the cause of the beginning of things, we must lay aside all ideas about God, except the idea that He may have been the unknowable cause of atoms and force. Granting that He did cause them, we may dismiss Him entirely from our thoughts after we have once gotten them. The idea that He ever exercises any providential control over, or any personal oversight of, the action of force upon atoms, may be a pious belief, but in the view of science it is a useless and an inadmissible hypothesis.

The other school adopts a form of materialism which, though apparently not so gross, is nevertheless, to all intents and purposes, as real as the one we have just mentioned. It puts just as great an obstacle, as we shall see, in the way of making the evolution theory account for the development of intellectual powers and moral perceptions as well as of physical organisms. Its advocates admit that there is something more in the universe than matter and force, because they meet with certain phenomena for which these factors alone cannot account. While Mr. Fiske asserts that we no more know whence comes the soul than we know whence came the universe, yet he affirms that "by no possibility can thought and feeling be the product of matter." So, too, Mr. Huxley believes that beside matter and force "there is a third thing in the universe, to-wit, consciousness, which is neither matter nor force, nor any conceivable modification of either." The manifestations of this third thing, which are called psychical phenomena, are so interwoven with the phenomena of matter that evolutionists are compelled to bestow upon them a large share of their attention. They believe, in fact, that at some period in the process of development "there came, like a thief in the night, a wonderful moment when psychical became of more use than physical changes to man's brute ancestors." But inasmuch as on the psychical side of conscious living beings we never see anything but mental or spiritual *phenomena*, they hold that if these be abstracted there is, as far as we can ever know, nothing whatever left. What is called spiritual substance is in their view a mere metaphysical abstraction, and it is impossible ever to find out whether there is any real entity corresponding with it. And even if there be, it must forever remain an unprovable hypothesis that it has the gift of spontaneity, that is, of action by virtue of innate powers of its own, independently of anything in its inseparable companion, the body.

But this professed agnosticism is at bottom only materialism in disguise. For while it asserts that it neither affirms nor denies the existence of such a thing as spiritual substance, it does virtually deny it by undertaking to explain the work of evolution without reference to the question of its real nature and properties. Even if its existence were an admitted fact, the evolutionist's method of reasoning would so exaggerate its dependence upon its material environment as to make the latter everything and itself nothing. Has it such innate powers of self-direction as to make its development not wholly dependent upon that of the physical organism with which it is associated? Had the different elements in the complex being of each of our brute ancestors such a reciprocal influence upon each other as to make his survival of his less fortunate fellows, who perished in the struggle for existence, depend

as much upon his superiority to them in his brutish mind as upon his superiority in bodily strength? Did inborn cunning and sagacity in using his strength have as much to do as the strength itself in putting him ahead of his fellows in the race for manhood? Even the less materialistic evolutionists object to such questions on the ground that they relate to a matter about which we can never have any positive knowledge. Since it is impossible ever to see the mind of either ape or man at work as it is in itself, and apart from material surroundings which influence its action, the true position of science as to its nature and faculties is avowed agnosticism.

Starting back with these materialistic principles, the extremists tell us that at every step in the past the organisms of which life is either the product, or now at least the accompaniment, were less and less complex, until we arrive at last at a point in the distant past at which there was nowhere in the universe any organized structure, and consequently nowhere any life at all. This was for us the "beginning." All that lay back of this must remain forever unknown, and all speculation about it is unscientific and unprofitable. We may, if we choose, cherish the belief that God created out of nothing the primordial mist out of which all things have since been evolved. About that matter science has nothing to say, because it implies a mystery, and mysteries are things that she does not deal in. So far as she is concerned, we have arrived at the limit of possible human knowledge of the past. And there we find nothing but non-luminous nebulous matter. It extended away in every direction so as to fill the universe, leaving no room for any conscious life, or spirit, or will. If it had been created by God, it had shut him out so completely from the space it occupied that science has never been able to detect the slightest trace of His connection with it in any way whatever. There was nothing anywhere but lifeless atoms of matter, ready when the time for it came to be acted upon by force.

Now while the extreme evolutionist professes to be able, without the aid of Revelation, to bring the light of true knowledge out of this primeval chaos, we can easily see that he never for one moment gets out of the darkness of its mist. He is compelled to go into the domain of what he calls the "unknowable," and when he returns, he brings with him mysteries and contradictions that hang over and darken, even to the end, everything he tries to explain.

In the first place, it is a contradiction in the outset for him to assume the existence and operation of the two factors, atoms and force. For it is a first principle with him that in explaining those visible phenomena, which alone are the proper subject-matter of

science, one must not go into the domain of the invisible and intangible to find the efficient cause of those phenomena. That is the very reason why it is asserted that God, and all such impalpable things as the mind and soul, as entities distinct from matter, should not be allowed to enter as factors into any problem to be solved by science. But is the existence and action of God, or of spiritual as distinguished from material substance, any greater mystery than the mystery connected with the atoms whose separate individual existence is assumed? No one has ever separated one of them from its fellows so as to see, or weigh, or measure it. No one has any real knowledge of them. Huxley frankly admits that he cannot conceive how such a thing as an atom can exist. It is not even certain that they have ever had any existence at all, except in a theory devised to account for the phenomena of matter. Thus evolutionists banish from the domain of science all immaterial substances, because they are invisible, intangible, impalpable, while at the same time they demand that their theory shall be allowed to commence with a whole universe of atoms that can no more be seen or touched or accounted for than a soul can be. This is an inauspicious beginning for a theory which is designed to show us how to reason consistently. But we shall find that we cannot follow the extremist without allowing him to be as arbitrary as he pleases, and without "leaping blindfolded at his bidding across many dark chasms in our way."

This is just as clearly illustrated in the case of his other factor, force. Here again Huxley confesses that he can no more conceive how force acts than how atoms can exist. We know nothing whatever of its origin, or of its nature, nor can we say positively that it has any existence at all, apart from the presence and action of a living intelligence and will to put it and to keep it in operation. It belongs, if anything does, to the domain of "unknowable" things. It is just as impossible to see or touch or weigh it as it is to perform these operations upon a soul. It is true that we speak of feeling or of measuring a force. But what we really feel is that which the force puts in motion. The force is something that is assumed to account for the motion, just as in the spiritualistic philosophy spiritual phenomena are accounted for by predicating the existence of the soul. Here again evolution goes beyond what is seen and known in search of an invisible cause for it, and it thus does the very thing that its advocates condemn in those who find in the will of God the cause of all things. They assert that the idea of His present personal connection with the universe is a mere figment of an unreasoning faith; and yet, for all we know, force may be a mere figment of "the scientific imagination," and it may be just as true that bodies move

because God wills that they should as it is that our limbs move at the bidding of our wills. The choice of an invisible mysterious impersonal force, to take the place of a personal God in the control of the universe, seems to be wholly arbitrary. It certainly cannot be justified by the plea that it enables us to deal only with that which is visible and tangible, and therefore readily understood. It cannot be claimed for it that it has the advantage over the Christian genesis of involving nothing that goes too far beyond the limit of human vision to be fully comprehended and clearly explained.

The next step in explaining the work of evolution betrays again a disregard for consistency. The advocates of the theory assert, as we have said, that all speculation as to what existed or occurred before the process of evolution began is useless. Yet they no sooner get the two factors they ask for than they begin to speculate about the state of things prior to the time when these two factors began to evolve the present order of the universe. This, however, could not be very well avoided. For the commencement of the work of evolution required very peculiar conditions. It could never have begun at all, except upon the assumption that in "the beginning" the atoms were in such a relative position, and the force in such a passive state of inaction as they have never been known to be in since. As far as we know, the force of attraction between the particles of matter has *always* been in operation; and consequently the tendency of the atoms has *always* been to come together and form the earth and the heavenly bodies, as the first step in the process of evolution. But this would not suit the purposes of the evolutionist at all. For it would throw the beginning so far back into the eternity of the past that even Darwinism would have a perplexing surplus of time on its hands. Instead of being incomplete, as it still is, the work of evolution would have been finished, the perfect man would have been developed and disappeared, and the end of all earthly things would have come millions of ages ago.

The evolutionist gets over this difficulty by assuming that before the present order of things began to be evolved out of chaos, the law of gravitation was suspended; or rather, had never begun to operate, and that the atoms which, according to all scientific observation and experience, have always tended to come together, then stood apart, so as to form a mist instead of the solid earth and its contents as we now see them. But, apart from the objection that this is speculating about the unknowable, such an assumption is wholly incompatible with another which he is compelled to make. For, in order to account for the action of that force of attraction by which atoms of matter cohere together, it is assumed that this force is "inherent" in them. But what does that mean? Only that the

property of coming and remaining together so inheres in, or sticks to atoms of matter that they never have been found without it. But if so, is it not a contradiction to say that at first, notwithstanding this quality so inseparable from them, they were scattered about in a mist, instead of being gathered together into organic and inorganic structures as they have been ever since? To this question, as well as to the inquiry how long, by what power, and for what reason they had been held apart, the evolutionist makes no answer. All that he has to say is that his theory will not work at all, unless he is allowed to put the atoms just where it requires them to be, even if in placing them he has to violate his own first principles by speculating about the unknowable, and to violate the known laws of nature as well.

But this is not the only extraordinary privilege that the theory of evolution demands. It also asks to be excused from answering a crucial question, which decides at once whether it makes good its claim to give a rational explanation of the way in which the course of events in the world's history began. That question is this: If, as is assumed, the forces of nature were before the "beginning" held back for a time from their proper action, how did they ever come into play at all? The evolutionist's only answer is, I do not know. Of the only two possible replies his own principles forbid him to give one, and he will not insult our intelligence by giving the other. Force first began its action among the atoms of matter either by the fiat of Almighty God, or by chance. But he cannot accept the former alternative, for he insists upon beginning with nothing but a blind force and a material mist. He puts away from him, as being wholly inadmissible in a scientific investigation, the idea of any living intelligence to conceive, or of any conscious will to execute a plan in regard to the movement of the particles of the mist. Of course, then, nothing could ever have happened among them except by chance. The only account he can give of the commencement of the process of evolution is that the atoms just happened to begin to exercise their inherent power of attracting each other. Without a hand to touch it, the curtain arose mysteriously, and the drama of the world's undesigned history simply began of itself.

But chance did not perform its only office in the scheme of evolution in thus first setting in motion the course of events. Ever since the beginning it has been constantly at work producing the most astonishing and naturally incredible results. For although when arranged in the form of a mist, the atoms were mere dead matter, and began their movements by chance only, yet they no sooner commenced to move than they showed something very much like a will of their own. They have their affinities and their

antipathies, very much as men have their likes and dislikes. In moving to and fro in the universe, atoms of hydrogen, for instance, may meet other atoms for which they have no "chemical affinity" millions of times, but will pass them by as strangers with whom they have nothing to do. But when a certain number of atoms of hydrogen meet a certain number of atoms of oxygen they unite and form water. In the same way, oxygen and hydrogen, when they meet carbon and nitrogen under certain conditions, unite with them to form living tissue. And so it is with atoms of all kinds. They seem to have definite rules of conduct to which they always adhere. If men acted thus, we should be absolutely sure that they had submitted themselves to some will, which had imposed upon them laws which they had consented to obey. But the evolutionist excludes from his view any such thing as a divine will that might account for this conduct of the atoms of matter, and he does not attribute to them any will of their own. Of course, then, they must have been guided wholly by chance, not only in the incipient stages of evolution, but in entering into all the combinations they have formed down to the present day. And thus we have the perpetual mystery and contradiction of chance acting by uniform laws, and evolving out of the primeval chaos the continued order and harmony of the universe. The only escape from this conclusion is by returning to what the evolutionist would call the exploded doctrine of final causes, and of a continual providence of God over all things.

But let us come now to the second stage of evolution, in which we have to consider the work of atoms and force when the former are aggregated in the form of sentient and conscious beings. In this stage the famous "struggle for existence" takes a new form by becoming a *conscious* struggle, and in order to give a rational account of its motive, its originating cause, and its final outcome, it is necessary to take into consideration certain participants in it of which we have so far said but little:

These participants contribute nothing to "the survival of the fittest" in the case of inanimate purposeless things. A favorable environment secured by non-sentient organisms, seemingly by accident, might be considered perhaps as accounting for the survival of the most fortunate of them. A plant, for instance, might survive and be developed by reason of advantages of situation, with the securing of which it certainly had nothing to do. But in each particular case of animal life, in which the struggle for life is conscious, and has a motive, and is knowingly directed towards the prolongation of life as a definite end, we obviously have a different problem presented to us. For intelligence and persistent will in pursuing an object are here manifestly present. It is equally

manifest also that they take such a controlling part in directing the struggle in each case, and in the decision of its results, as to make them the most important factors in it. And unless they are to be considered the product of matter and force, we cannot make the action of matter and force upon them the sole true measure of their influence upon the processes and the outcome of evolution. We are compelled to ask such questions as these: Is there not present something to be taken into account, call it immaterial or spiritual substance, or what you will, which is not bound by the laws of matter, but has a power of its own of independent spontaneous action? Is the matter of the physical organism with which it is associated merely the instrument with which it puts its purposes into effect? Or is the physical organism its prison house, which allows its powers room for action and development only as it is itself more or less improved by development?

Evolutionists answer this last question in the affirmative. Mr. Frederick Harrison is fully convinced that the faculties of mind, feeling, will are so directly dependent upon a physical organism, that he considers it sheer nonsense to talk of such faculties in the absence of physical organs. Huxley is unable to conceive how such a thing as immaterial substance, or "spirit" can exist. And even granting its existence, its manifestations, he thinks, are so dependent upon certain molecular changes in a material body, that the hypothesis of a spontaneous exercise of its faculties, if it has any, is a wholly unprovable assumption. Evolutionists of his school therefore "banish from all regions of human thought what are called spirit and spontaneity." Concerning the nature and laws of that which lies on the psychical side of the boundary line between the material and the mental world, they profess that they know nothing, except that it is dependent for the manifestation of its phenomena upon something material. Is there on that side a substance which underlies mental phenomena, as there is on the other a material substance underlying physical phenomena? Has it the power, in any way, to modify or limit such influence as, from their inseparable association in this life, material substance would seem to have over its acts? To such questions their answer is, our business is with phenomena, and not with the philosophy of the substance and innate powers of mind. We hold that nothing true can be learned of the origin and development of intellectual powers and moral perceptions, except by turning away from all speculation about the invisible and intangible, and confining ourselves to the visible phenomena which invariably accompany the manifestations of intellectual and moral faculties.

Now the truth or falsity of this initial agnostic postulate determines the truth or falsity of the evolutionist's conclusions con-

cerning the origin and development of man's physical, mental, and moral being. For the whole chain of his reasoning hangs by this postulate; and if it can be shown to be a mere painted hook upon the wall, then every link in the chain must fall to the ground. Let us see then whether its strength is real, or only fancied. In other words, let us endeavor to answer this crucial question—can we give a rational and consistent account of the origin and history of those psychical changes, which are of so much more use than physical changes in the work of evolution, if we begin by ignoring all questions concerning the nature and properties of that in which those psychical changes occur? It seems to us impossible to do so, because if we ignore those questions, there is no alternative left us but to accept the baldest materialism and to make all psychical phenomena the mere product of matter. In reality, there are no degrees in materialism. We have no choice except between that postulate of the spiritualistic philosophy which attributes to mental substance a separate existence and certain innate powers of its own, and the materialistic postulate that there is nothing, after all, in the universe but matter and force. To fall back upon agnosticism is simply to make a futile effort to evade this precise and clearly-defined issue.

We shall endeavor to prove this by showing that evolutionists are compelled to abandon their avowed agnosticism before they can take the first step forward in the line of their intended arguments. But we shall not undertake to follow them through any part of that long train of reasoning by which they endeavor to show that their theory explains everything, from the development of the ape into manhood down to the development of modern society, with its civilization and morality, out of the savagery of primitive man. For it covers so vast a field and takes in such a multiplicity of details that in investigating them we should be apt to lose sight of that crucial question which we have just asked, and the answer to which, when sought in any single instance of supposed development, suffices of itself to determine once for all whether the system of reasoning based upon this mass of details is true or false. We shall try therefore to simplify matters by taking a particular instance of "the survival of the fittest." Let it be that of one of those brute ancestors from whom we are said to be descended. In investigating the consistency and satisfactoriness of the agnostic principles of the evolution theory, it is best to take a concrete case like this. For it not only involves the test question upon which the value of the whole system turns, but it presents it so clearly and concisely that there is no danger of its being confused with other considerations.

Let us, then, imagine two of our apish ancestors—a little lower

than man in the scale of being—approaching a bunch of fruit which each of them wishes to appropriate to his own use. The light reflected from the body of each falls upon the retina of the eye of the other; molecular action in his nervous system is at once begun, and an impression is conveyed to his brain; and this is instantly followed by those phenomena of consciousness—consciousness of a love of life, of a fear of losing it, and of a purpose to fight for it, which alone makes his struggle for existence different from that of inanimate, purposeless things. We have here all the conditions needed for a fair trial of the materialistic postulates of the evolution theory. It would be of no advantage to us if our knowledge of physiology were perfect, so that we understood thoroughly every relation between every nervous impression, in ape or man, and its attendant phenomenon of consciousness. Nor would it help us if we could see the precise effect, both of heredity and environment, at every step, backward to the time when the ape was a mere speck of protoplasm, and forward to the time when the development of man shall have been completed. Let the chain of associated physical and psychical phenomena be ever so long, the questions upon which the correctness of the evolutionist's method of reasoning depends suggest themselves at every link, the last as well as the first. They are such as these: is that invisible something which manifests the psychical phenomena of conscious life so helplessly dependent upon that which manifests its material phenomena as to make the former practically passive so far as causing any change in the character of the psychical phenomena is concerned? As that life is developed from lower into higher forms, the quality of its psychical manifestations is so modified that the ferocity of the ape finally becomes the morality of civilized man—did this improvement originate in a power of self-development innate in the psychical part of the conscious being, or is the only knowable source of the psychical improvement to be sought in the influence of an improvement in the material surroundings of the psychical part? Since it does not matter, as we have just said, at what point in the process of development we begin such inquiries, these questions have their equivalent in one which we may ask concerning the ape who survived his antagonist in the fight for the fruit. As his love of life furnished *the motive*, without which his struggle for existence would never have been made at all, it is plain that all the consequences of his survival, of every kind, both to himself and to his remotest posterity, were due at bottom to the influence of that motive. It was the real root out of which grew every branch and leaf and final fruit of the tree of his evolution. The vital question, therefore, for the evolutionist, is: Was its existence or its influence in any way really dependent upon any condition of material things within or around him?

Now there is no way, as far as we can see, of deciding this point except by determining in which of his two parts, the material or the mental, his love of life and his purpose to prolong it *originated*. For in whichever part their efficient cause lay, that part must be supposed to have had most to do in sustaining the love and directing the purpose, and, consequently, most to do in deciding the bearings of the struggle, both near and remote, upon the ape and his posterity. It would certainly seem to be the one factor in his development whose powers and influence it was most necessary of all to take into account and to understand. We are obliged to infer this, unless we can prove that when once the love and the purpose were begun in the psychical part the other material part, so to speak, took charge of them, fostering, intensifying, and developing them more than did their parent part.

The question then is, whence came the ape's desire and purpose to prolong his life? The answer can certainly never be given by physical science, since it is forever impossible to apply a material test to a fact of consciousness. Nevertheless the *logical methods* of inductive science should be applied to its solution. The refusal to apply them here, when they are declared to be universally applicable to every subject whatever of investigation, constitutes the materialistic offence of the evolutionist. No one but an out and out materialist would say that the molecular action of the ape's body produced the psychical phenomena we are speaking of. Then, unless they were uncaused, they must have been caused by the spontaneous action of some invisible element in his nature. If there are three supposable explanations of a given phenomenon, and we are obliged after careful investigation to exclude two of them, the logic of science compels us to accept the remaining one.

Yet in the case under consideration, evolutionists seem to have an invincible repugnance to acting upon this principle. To avoid doing so, they take refuge in agnosticism, saying that they do not know what actually causes psychical phenomena. They are satisfied to give unintelligible definitions of atoms and of the action of force, but they object that the definition of the spontaneous action of immaterial substance as meaning that its acts are at least not caused by anything outside of itself, is only negative, and therefore inadmissible. Mr. Huxley thinks it equivalent to saying that its acts are not caused at all, as if it were an indisputable truth that the efficient cause of all things must be sought in matter, or nowhere at all. They are content, therefore, to assume that, whatever be the cause of psychical phenomena, any change in their quality or character is always due to a change in the material environment of that cause, and not to any innate powers of

its own, by which it may possibly control its surroundings, instead of being wholly controlled by them. Even those of them who would indignantly deny that they were materialists, have nothing to say, in treating of the evolution of psychical phenomena, of any power of self-determination in that which is the seat of consciousness. Whether they mean to do so or not, they seem, no less than the avowed materialist, to make the development of the ape's sagacity into a human intellect the outcome of the play of forces of nature upon the matter of his body, by which the latter was developed into a human body. If a third party, which was neither matter nor force, had a hand in the work, they hold that it comes within range of our knowledge only so far as it was affected by matter and force.

We shall now proceed to show that, when held to a strict consistency with these materialistic principles, they cannot give a satisfactory account of the beginning and the outcome of the supposed contest between our two apes, which we have taken as a typical case, involving the fundamental question upon which the truth of the evolution theory depends. They are compelled to conform to the logical methods of scientific reasoning by assuming that which they profess to deny, namely—that the psychical element in conscious life has certain innate faculties which it brings into exercise, independently of the influence of anything in its material environment. To prove this, let us suppose that one of the apes killed the other, and thus survived to contribute his mite to the further development of his race. What in his case did the struggle for existence mean?

In the first place, it certainly did not mean that the separate atoms of matter that constituted his body battled with each other for life. For atoms are immortal things. Of all the countless myriads of them that have been pulled about, and dashed hither and thither for millions of years, by the forces of nature, not one has ever perished. Their number now is precisely what it was when they formed the unorganized nebulous mass that once filled the universe.

In the second place, it did not mean, according to evolutionists, that there was united to his material body an immaterial substance, whose properties were intelligence and will, and that this intelligence and will made a conscious effort to preserve the bodily organization with which their own acts were so mysteriously associated. For be it remembered, that according to the grosser materialistic philosophy of which we have spoken, he was nothing but an assemblage of particles of matter, and that what we call his sagacity and will were really nothing more than the resultants of the molecular action of the atoms that composed his body. But

if so, it is of course just as absurd to suppose that this result was conscious of the molecular action that produced it, or struggled to preserve his life by prolonging that action, as it would be to say that a tune struggled to preserve the harp that played it.

Nor do we get any more intelligible idea of how his conscious struggle for existence ever came to begin, or how it came to result in his favor, and in its long train of consequences to his human posterity, by taking the less materialistic form of philosophy, which denies that consciousness can ever be the product of matter. It might indeed help us if we were allowed to assume that there was such an innate mental disparity between the apes as we often see in men. Possibly the one that survived might have had more cunning, and a fiercer and more fearless temper than the other, and on that account may have succeeded in killing his stronger foe. But that would be comparing mind with mind. It would be trenching upon a sort of mental philosophy. We would be told that, while the domain of the physical and the domain of the mental are contiguous, touching each other at every point, still it is never permissible to go over into the latter to seek the efficient cause of anything we see in the former. Even admitting that there was a superior degree of intelligence in the ape that was fittest to survive, we must keep on the physical side of the boundary line in looking for an explanation of it. And on that side we can find nothing to account for it, unless it was that physical superiority by which he and his ancestors had gotten more and better food than other apes. That is to say, his survival, so far as the evolution theory undertakes to explain it, must be considered as due to the action of the matter of his body, and not to that of his intelligence as a property of an invisible entity distinct from his body.

By this latter, then, no less than by the grosser form of the evolutionist's philosophy, we are debarred from considering the surviving ape as being, from a scientific point of view, anything more than a mere agglomeration of material atoms. We are forbidden to account for anything about him by any hypothesis concerning the independent action of a supposed mental element in his nature. Consequently, his struggle for existence can only mean that the agglomeration of atoms that constituted him struggled to preserve and perpetuate its organization as a body.

But this lands us again in the absurdities of the rankest materialism. And there is no escape from them except by taking into consideration, as the most essential point in a rational account of the struggle, the very thing which the evolutionist leaves out of view, namely, the nature and powers of that invisible something in the ape which was distinct from his physical organism. If the

question of its innate faculties be ignored, or if it be asserted that the only knowable thing that could have influenced any of its operations is to be looked for in its material environment, then we must look solely to the latter to explain the *motive* for the struggle. And this is evidently the most essential point of all. For the presence and influence of a conscious motive is precisely what differentiates his struggle for existence from that of inanimate things. It is this that takes him out of the category of those purposeless creatures that are driven aimlessly about by the forces of nature. Therefore, merely to assume the existence of such a motive, without any attempt to give a consistent account of its existence, is evidently to beg the whole question of the sufficiency of materialism to give a full and satisfactory explanation of his struggle for existence, and of his development as its outcome.

Now, how does the evolutionist account for this motive? By quietly assuming that it was furnished by the ape's natural love of life. But certainly this love was not a property of his brain, or of his spine, or of anything else material within or around him. Being a mental phenomenon, it could not possibly be an attribute or a product of the matter of his body. It must have been the property of an invisible psychical element in his nature. But concerning the powers and attributes of this element the evolutionist professes to know nothing. Of course, then, he contradicts this fundamental agnostic postulate when he assumes that he does know that it had the property of loving life. He virtually abandons his contention that he can explain the work of evolution fully, by the help of his materialistic principles alone, by borrowing from the spiritualistic philosophy the postulate he needs to keep his explanation from breaking down at the start. Without this borrowed hook, he would have nothing on which to hang the first link in his chain of reasoning. If he begins by assuming that the psychical element had no known property but that of the passivity with which it submitted itself unresistingly to the controlling influence of its material surroundings, he has no right to contradict himself by supposing that it had that active love of life which led to a struggle to prolong it, or that it had that sagacity and fierceness which directed the struggle to a successful issue. If he were consistent with himself he would admit that his reasoning begins in reality with the hypothesis that a number of atoms of matter, from some wholly inexplicable impulse, strove to hold themselves together in the form of the ape's body. It is true that his life depended upon their doing so; but why should they have cared to prolong his life at all? As they were themselves immortal, they were entirely independent of his fate. Their own life was assured anyhow, whether he died or not. Nor can we see why they should

not have been as indifferent as they were independent. For, as they were not sentient beings, it could have made no difference with them if by his death they had been separated, and then aggregated again in the form of some other animal. There is no conceivable reason why they should have preferred remaining an ape to being torn apart by a leopard and passing into his body by being assimilated as his food.

Their action therefore is utterly unaccountable, except upon the hypothesis that the beginning, the continuance, and the outcome in every respect of the struggle depended entirely upon the spontaneous action of the ape's mental part, and not in reality upon anything material within or without him. If we deny, or if we ignore this obvious fact, we are placed in the dilemma of being obliged to admit that a number of the atoms of matter first made an arbitrary and wholly inexplicable choice of a combination to enter into, and then began a fierce struggle to perpetuate it by defending it against the attacks of other similar combinations. And not only so, but they enlisted the sympathy of outside atoms. For when some of them wearied of the strife, and fell out of the ranks, by the waste of tissue and other natural processes, others at once came forward to supply their places. Thus they fought successfully to maintain their organization as an ape, until at last all became worn out with the contest, none others volunteered to take their places, the molecular action among them ceased, and the organization fell to pieces—or to put it in plain English, the monkey died.

But we may trust that he had not lived in vain. There was hope in his death. If the assemblage of atoms that constituted him had prevailed over the assemblages which constituted other apes, so as to succeed in always taking from them the largest and most nutritious fruit, and having it all to himself, he had made a double gain—a present one for himself, and a future one for his posterity. When by the use of the food he had thus selfishly taken from weaker apes his body grew stronger than theirs, the molecular action of his brain became more rapid and vigorous than that of their brains—which in the language of evolution means that his intellect advanced a step beyond theirs on the road towards the development into human intellect which was its final destiny. And when he died he bequeathed the benefit of this advance to his sons and daughters, so that at their birth they were better equipped than other apes for progress towards the goal of their race. So they in their turn handed down to their posterity this inherited advantage over their fellows; and this process went on until in the ten or the hundred millionth generation his descendants finally became men and women.

Such is the account of our origin that evolutionists ask us to accept. Before exchanging for it the account which affirms that we are not mere fully developed apes, but beings created originally in the image and likeness of God, one would think that every man would demand an absolute scientific demonstration that the latter was false, and the former true. But instead of this, those who have abandoned the old for the new account have done so for reasons that are very far from being conclusive. The one thing that they have most clearly demonstrated about their theory is their ardent desire to believe in its truth. So strong is this desire that they are perpetually ransacking the earth for evidence in its favor, and constantly professing to find it, even in such surprising places as the creases in the soles of a baby's feet. And having by dint of this incessant search added a good deal to the apparent plausibility of an idea, suggested long since—that similarity in anatomical structure might possibly be due to identity of origin—they are impatient with those who hold that mere plausibility ought not to be taken for positive proof, especially where there is question of man's origin and destiny.

To be convinced that this plausibility is deceptive, it is enough to keep in mind that one-sidedness which we have pointed out in their reasoning. For it puts them precisely in the position of a chronicler who should resolve to base his history of a nation solely upon his inspection of its arsenals of weapons of warfare. Such a writer would doubtless justify his course by giving reasons for it very analogous to those which evolutionists assign for their mode of reasoning. He would say perhaps that, while he assumed of course that the nation had always had a certain policy of self-aggrandisement, yet it had always been too carefully concealed ever to be known with certainty. Its discussion had never yet ended in anything better than mere speculations, whose correctness it would always be impossible to verify. It was wise, therefore, in him to leave it out of view altogether, along with all questions about the superior wisdom of its statesmen, and the ability of its generals, as compared with those of the nations whom it had conquered. For all these would merely lead him away from the only true source from which its history could be learned, which was simply an inspection of, and inferences from the condition of its arsenals. Nor would we be surprised, if after his beginning with such a theory, he carried it so far as to make the nation's superiority in armament the cause of its improvement in culture, civilization, and morality. We should expect him to say that so far as history could tell us, this latter improvement was due at bottom to the substitution, in the course of time, of Gatling guns and long range rifles for battering rams and bows and arrows. If he went to this extreme,

he would only make the parallel between his reasoning and that of the evolutionist complete. For while the latter asserts that the sagacity of the ape was developed into the intelligence of the man, he tells us that, so far as science informs us, this development was due to a gradual long continued improvement in the physical organization of the ape. That is, he makes the improvement in the material bodily instrument the only knowable cause of the improvement in the living intelligent agent that used it. And he takes this position only because he can see the instrument, but cannot see the living agent. He does not object to assuming that invisible atoms are endowed with powers of mutual attraction, but he is utterly opposed to assuming that the mind of man was, in its original state, endowed with such a power of spontaneous action as to raise it above the condition of a mere helpless irresponsible creature of circumstances. He prefers the hypothesis that it was once an ape's mind, wholly indifferent to the question whether it should remain such, or whether by the success of its owner in the struggle for existence, it should go on to development into a human intellect.

But let us follow the theory of evolution into the moral world, which is also claimed as a part of its far-reaching domain. We will begin by giving, as briefly as possible, its account of the way in which our moral perceptions originated and have been developed into definite judgments as to the right and wrong of our acts. Here again we will take a concrete case, in which a particular thing is condemned by conscience as a vice. Let it be the sin of gluttony. How did inordinate indulgence in the pleasure derived from food and drink come to be regarded as morally wrong? The reply is, that the judgment that it is so is simply the outcome of experience. Going back to the days of primitive man, each individual among those who first emerged from apehood doubtless sometimes found in his own case that the bodily discomfort produced by over-eating lasted longer, and was therefore greater, than the passing gratification that eating afforded, and that it also lessened the vigor of the working of his mind. His descendants also noticed the same thing, and by a comparison of each other's experience, it came to be accepted among them as a fact that in the long run gluttony did them more harm than good. And as man's capacity for reflection increased, there doubtless resulted a conviction, in some cases slight and transient, in others more vivid and lasting, that unrestrained indulgence in the sensual pleasure of eating interfered with the performance, in the fullest measure, of the best and highest work that man was capable of. Thus the conclusion finally became general, if not universal, that taking the human race as a whole, gluttony impeded its progress

towards the attainment of the best that was in reach of its capacities.

This judgment, that the vice we are speaking of was opposed to the true well-being of mankind, having originated in wide and long-continued experience, at last became hereditary. It was worked to a greater or less degree into the very texture of the being of every child that was born. And being now an inherited judgment, it is no longer necessary, as at first, that each individual should have a personal experience of the evils of gluttony. He comes into the world with such an inborn tendency to believe that it should not be indulged in, that actual indulgence in it is not needed to suggest the idea that it is wrong. As soon as he is old enough to reflect, he has, apart from anything in his own conduct, a feeling of responsibility in the matter, and a dread of penalty if that sense of responsibility is disregarded. That is to say, he has an inherited conscience, and when it holds its rightful sway it leads him to put the good of his race at large above the personal gratification which he might derive from the full indulgence of his natural appetites.

Now we shall have to put to those who advance this theory very much the same sort of questions we have been asking all along. If this moral judgment comes to us by inheritance, through what channel has it been transmitted to us? As it is a psychical phenomenon, and is therefore assuredly not a property or a product of matter, no physical organism could ever by any possibility have transmitted it to any other physical organism. If it came by inheritance at all, it must have been inherited by the psychical part of the son from the psychical part of the father. This conclusion is inevitable. But if so, then here again the evolutionist abandons his postulate of complete agnosticism about the powers and properties of that which is not material, by assuming that he knows at least that the psychical element in man has the power of transmitting moral judgments from father to son.

But again, we have already seen that he assumes that the ape we have been speaking of had a love of life, independently of any influence of his material environment upon that which was the seat of that love. He is compelled to make this assumption because he admits that as the love was a psychical state, it could never have been the product of any number of his different bodily states. So here also, the morbid bodily states of indigestion, headache and so-forth, though repeated in a thousand generations, could never have produced the psychical phenomenon of a moral judgment concerning the vice of gluttony. The most that they could have done would have been to furnish the occasions upon which that which had the power in itself to form such a judgment began to manifest that

power. It is clear, then, that the advocates of the experimental theory of morals place themselves between the horns of this dilemma. If we ask, was the moral judgment that gluttony is wrong produced by bodily sickness and suffering? they cannot answer yes. For that would contradict their postulate that a psychical phenomenon can never be "in any sense the product of matter." And if we ask, were sickness and pain the occasions upon which the judgment was formed? again they cannot consistently answer yes. For the occasions would evidently have been useless unless they were presented to that which had in itself the power of forming the judgment. That is to say, the conscience which they assert to be the outcome of experience must have existed, in its germ at least, prior to experience. Thus their attempt to explain the origin and development of our moral beliefs, without any reference to the question of the innate laws of man's psychical part, breaks down as completely as their attempt to explain in the same way our intellectual development. In both cases, while asserting that the postulates of the spiritualistic philosophy are unscientific and inadmissible assumptions about that which is unknowable, they are compelled to make those very postulates the starting-point of their own reasoning.

But there is another objection to placing morality upon this experimental and utilitarian basis, which is that it requires us to believe in a most stupendous and naturally incredible miracle. Compared with this miracle, the passage of the Red Sea and the River Jordan by the Israelites was as nothing. In the latter events the wonder was that a body of water was merely held back for a time from flowing in its usual course. But on reaching the confines of the moral world, the current of evolution not only rises in a mysterious manner to a higher level, but it actually turns back upon its former course and flows uphill in the opposite direction. Up to this point in the process of development the principal motive power was utter unredeemed selfishness. The ape that advanced beyond his fellows toward the goal of human nature did so only by selfishly appropriating to his own use whatever was best adapted to his development. His own advance was impossible without an utter disregard of theirs. The degree of his progress, both while he remained an ape and for a long time after he became a man, was proportioned to his fierceness and strength, and to his willingness to use those qualities in trampling upon his weaker fellows.

But after he became a man he saw, in the course of time, the tendency and final end of that process of evolution which had made him a human being, and then he perceived that the selfishness which had brought him thus far was an obstacle to the at-

tainment of the highest and best results which that process was capable of producing. He looked ahead and foresaw a future glory in store for his race as the final fruit of ages of development, and at the same time he saw how it was ignored and its coming retarded by those who lived for the present only and for self alone. In fact, faith in this destiny, and the hope of its attainment in the future by our posterity, are the prerogatives of those only who have learned to believe in the all-embracing reach of the doctrine of evolution. And while their number thus far is small, perhaps, yet they are so enamored with the vision of beauty set before them that, forgetful for the most part of self, they are willing to live for the good of future generations. This last lofty and unselfish motive is not, it is true, the only one by which they are actuated in their conduct. They often restrain the gratification of their appetites merely from a conviction that it lessens in the long run the amount of good that may be gotten out of a lifetime. So too, they are sometimes considerate of others, because they know that they cannot trample upon their rights without its reacting at once to the detriment of their own happiness.

But this last-mentioned refined and calculating self-love, while it is undoubtedly one of the complex motives that control moral conduct, is not the chief motive of the loftiest morality by which men may be actuated. They are capable of rising to the conception of a higher aim in life than any that merely concerns self, an aim to be attained by the sacrifice of a present and personal to a future and impersonal good. When once they have risen to this high moral plane, they curb their selfish impulses by the reflection that in the ceaseless interaction of the forces of the universe they hinder the progress of the human race toward its true goal. They cannot comprehend very clearly, it is true, how they hinder it. They cannot see exactly how, in the infinity of forces at play for millions of years, such an infinitesimal quantity as the fleeting passions of a single individual can have much effect one way or another: and in time of temptation self-love often pleads successfully that they are as nothing. But still they believe, by a sort of faith of their own, that anger and avarice and lust are evil things for the world at large, and by the working of this faith they curb their force within themselves. And thus they have come to regard the loftiest morality as consisting in so living as to hasten, as much as in them lies, the evolution of the perfect man of the future.

Such a morality is evidently in the highest degree unselfish. In this feature of it lies that stupendous change in the current of evolution of which we have spoken. It constitutes also the fatal weakness of the system as a theory of morals. The unselfishness is too pure and entire to be credible. For the man of to-day, be it

remembered, is to have no share in the future glory of his race, except the share he takes in the evolution of that glory by making sacrifices for it which will be as completely forgotten, when he is dead, as if he had never made them at all. It is true that for some noble work done by him he may be commemorated as a benefactor of mankind. But that will do him no good personally, and he enhances his unselfishness by admitting that it will do him none. For there is no personal immortality for the evolutionist. He looks upon the hope of it as an evidence of that Christian selfishness which anticipates "a joyful eternity of the harp and the tabor." He looks forward to no future life beyond the limit of that fleeting influence which the memory of his conduct may have over those who survive him. When that is gone, nothing will be left of him but that which he may have contributed as a factor to the work of evolution, which may perhaps have some infinitesimal effect upon its processes after his death, but which will soon cease to be recognized as being due to him, or to be traced back to any connection with his life.

If such entire self-forgetting consecration to a future good, in which we can have no share, were possible, the scientific morality of evolution might perhaps challenge comparison with that of Christianity. But as it sets before us the chimera of an unattainable ideal, it might be dismissed as impracticable, and therefore unworthy of notice, but for the fact that it has one dangerous feature which may unfortunately commend it to some minds. That feature is that it gets rid of the fixed and definite moral code of the Christian religion. It destroys the sanctions and the restraints of conscience, in the true sense of those words, by leaving every man to be his own judge of what is morally right or wrong. For he alone is to decide how far he may selfishly indulge his passions, and how far he ought to restrain them in the interests of the evolution of the perfect man of the future. It is useless to tell the teachers of this new morality that mankind will never be held back from what is evil, and elevated to the pursuit of what is good, by any such regard for the future development of their race. It is vain to warn them that such a feeble restraint will be brushed away like a straw from its path by the whirlwind of human passion, and that to teach men that they have no personal immortality, and no responsibility to a Divine Tribunal, is to make them, not high minded philosophers living a noble life, but selfish brutes living only for the gratification of their appetites and lusts. This and all other objections to the system will go for nothing with its advocates so long as they can say, as one of them has recently done, "What a dead weight of care does morality, when viewed from the standpoint of evolution, lift from the heart of man." This it is

that makes it so attractive to its teachers that they are striving to imbue the rising generation with its principles. It is made a branch of "popular science," not from the love of a newly-discovered and loftier morality, but because it teaches a new way to escape from the restraints of morality.

The antidote for it is to make known its real meaning. When this is done, society may be safely trusted not to destroy itself by substituting the so-called scientific for the Christian standard of right and wrong. It will be only here and there that a few individuals will profess to prefer to the hope of heaven the hope of a future earthly glory of their race, in which they themselves will have no personal share whatever.

C. J. ARMISTEAD.

L'ANCIEN RÉGIME.

PART I.

THE term *L'Ancien Régime* is commonly employed to denote that social and political state which existed in France at the time of the French Revolution, when it fell to pieces and became replaced by what M. Taine calls "*le régime moderne*," as established under Napoleon. But the social and political state which existed when that catastrophe burst upon the world was a very different one from that which prevailed during the long reign of Louis XIV., and was profoundly divergent from the constitution of mediæval France, which had been slowly built up through the successive aggregation of province to province by succeeding kings. We, therefore, give a definite and very restricted meaning to the term, distinguishing it from both the mediæval and the especially regal régimes.

In the mediæval period, "state rights" and many "local franchises" existed all over France, while great political power was possessed, and many important local functions were performed by the noble "seigneurs" and ecclesiastical dignitaries. Many provinces possessed their separate "états," or legislative bodies, composed of the three estates or "orders," (1) clergy, (2) nobility, and (3) commons, or "*tiers état*." These local bodies almost always voted separately, that is by "order," and not by counting heads with the three orders united.

Besides these, there was the really national assemblage, the "States-general of France," which was similarly organized in three orders, and convoked irregularly by the king, according to his needs.

There were likewise the king's courts of justice—"Sovereign Courts"—also called "Parlements," which first gained a germ of political power at the beginning of the fourteenth century. Then the custom arose of communicating to the Parlement¹ of Paris the royal legislative acts, edicts, ordinances, letters patent, etc., so that the magistrates might be enabled to conform their decisions thereto. Having been read, they were entered on a register called "The Book of Royal Ordinances"; this was at first merely a form of promulgation, but during the troubles of the reign of Charles VI. the Parlement succeeded in gaining a right of "verification" before "registration," and therewith, by degrees, a right of "remonstrance," and ultimately of refusing to register. Thus, what had originally been but a mere formality grew into an indispensable sanction, and so the Parlement acquired a certain legislative power of control, though it had no initiative. Its veto also was merely suspensive, for the king always exercised the power of forcing registration, going to the palace of the Parlement and holding what was called "a bed of justice," when the law remonstrated against was registered before the king's eyes. The States-general were too conscious of their own weakness to be jealous of the Parlement, and at Blois, in 1577, passed a decree to the effect that all edicts ought to be verified and controlled by the Courts of Parlement which, as a sort of diminutive representation of the States-general, have the power of suspending, modifying, and refusing edicts. The States-general had been last held in 1614, and after its cessation the Parlement had assumed more importance still; and since, by ancient custom—the princes and peers of France had seats and votes there—it took by degrees the title of "Court of Peers," and on great occasions it gave force to its decisions by a formula stating that they were made in a court "sufficiently furnished with peers."

But besides the king's courts, the different "seigneurs" in France had their own baronial courts, of which the tenants of their fiefs were bound to make use to the profit of such feudal superiors.

The nobles and ecclesiastics paid no taxes, all of which were borne by the commons alone. This was not then unreasonable, since the nobility furnished the national army, and church dignitaries contributed men-at-arms, according to the fiefs they held, in addition to their claim to immunity on account of their sacred

¹ We adopt the French spelling of this word as conveniently distinguishing what denotes from what is denoted by the English word, "parliament."

office and the many public services they fulfilled—in education and ministrations to the sick and poor.

The specially regal régime must, we think, be taken to begin with the decisive crushings of the till then powerful nobility by Cardinal Richelieu and Louis XIII., and to have survived till the death of Louis XIV. in 1715. Under him the nobles lost the last vestiges of political power. Municipal franchises were often ruthlessly annihilated—just as the “states” of certain provinces during the regal régime were suppressed—such as those of Hainault, Province, and Dauphiny had been suppressed by Richelieu, and Louis XIV., for the last fifty years of his reign deprived the Parlements and other royal courts of their ancient rights of remonstrance.

The remaining period, that after the death of Louis XIV., is what we understand by the “Ancien régime.” During it the royal omnipotence continued to be asserted, and was, with few exceptions, still theoretically admitted; privileges and exemptions were maintained and even augmented (while divorced from their corresponding duties and utilities), and the Parlements, for the most part, made an even vexatious use of their renewed powers of remonstrance. It was a period of prolonged and increasing struggle between the reactionary tendency to revive mediævalism, an effort to maintain regal absolutism, and the gradually awakening spirit of modern political equality and social freedom. Its most essential condition was the strenuous assertion of social “privilege” and arbitrary inequality, and so its final destruction was the abolition of the division between the three estates of the realm—clergy, nobles, and commoners. Therefore, we deem that what we mean by the *Ancien régime* extended from the death of Louis XIV., in 1715, till November, 1789, when the division between these three orders of the state was finally abolished. As a supplement to a study of this period there might be annexed a notice of the fate of various individuals belonging to those privileged orders—as emigrants, or as survivors till the death of the last of the number, during the reign of Napoleon III.

Our present object is to show that it was the very spoiled children of that system which were the cause of its downfall—not, as is generally supposed, through jealousy of their privileges only, but actively. It was they who set the Revolution going, with the object of increasing their own power and importance at the expense of the royal prerogative. This, we think, is not yet generally known.

¹ Few persons are aware how much was done for education by the Church of France before the Revolution. That convulsion, instead of promoting education, went far to destroy it; nor even did the effort of Napoleon restore popular or higher education to nearly as good a condition as that which prevailed at the close of the *Ancien régime*.

From the beginning to the end of the *Ancien régime*, understood, as above explained, France offered a wonderfully rich field for the researches of the historical student and the antiquary. Its different provinces, annexed at different times, and under different conditions, were regulated by a chaos of diverse customs and jurisdictions, with which the powers possessed by the "intendants" and other emissaries of the central power more or less conflicted. Yet chaotic still was the social condition of the country with its ancient and its newly created nobility, and its universally diffused "seigneuries," "lordships," or "manors," with their variously ordered manorial rights and customs, which was so leading a feature of the France of that day, and its social and political condition might well be spoken of as the "Seigneurial," or "Manorial," régime.

From the time of Louis XIV.'s death, more and more havoc had been made of the religious condition of the French people. Nevertheless the multitude were still strongly Catholic even at its close, while enthusiastic loyalty and devotion to the sovereign—sorely tried as that devotion was—remained one of the most striking characteristics of the nation. The Church was also united to the state by the closest bonds,—bonds indeed which sadly fettered her action, whilst the closeness of the connection made her suffer in the popular estimation from the faults of the state.

It is easy to be wise after the event, and it is easy now to see that the greatest needs for the welfare of France were: An equitable redistribution of burthens according to the wealth of different contributors, the attribution of a useful field of political activity to the highest classes, a reform of glaring social inequalities apart from duties, and, above all, a reinvigoration of the nation's religious life through a restoration of liberty to the Church.

Unfortunately, the last-named and most supremely important of all reforms became more and more difficult even during the regal period, partly through the fault of Louis XIV. and partly in his despite.

No real religious reform is, of course, possible except in harmony with, and submission to, Rome, and the anti-Roman Gallicanism of the greater part of Louis XIV.'s reign is notorious. It was this attitude which rendered Jansenism possible, or at least prevented its being decisively nipped in the bud.

Jansenism is now such a theological fossil that there may even be some readers of this REVIEW who have forgotten what were its most essential evils. Its most detestable errors were:

1. The denial of man's free will.
2. The restriction of the scope of redemption and the assertion that Christ died only for the elect.

3. The denial that the Church is infallible with respect to dogmatic facts, *e.g.*, that it could not infallibly declare that the doctrine taught in any book was in fact heretical,—a contention which, of course, would make the teaching office of the Church almost nugatory.

4. The assertion that we are forced to confess all venial sins, and that otherwise confession is worthless.

5. The condemnation of the practice of giving absolution before the performance of penance, and the recommendation of severity towards penitents.

6. The practice of discouraging Holy Communion because we are not worthy to receive it.

Rigorism was taught by the Jansenists and probabilism scouted as laxity, whereas the latter is the only rational system of ethics even apart from revelation. Yet it is with this absurd system that the so-called "Old Catholics" have united themselves.

Jansenism may well be described as "Veiled Calvinism." It tends to render the whole system of Christianity ridiculous, and naturally paved the way for Voltaire, Diderot, etc. Jansenism had much the same relation to theology that Cartesianism has borne, and bears, to philosophy. Not only was it the cause of such evil, but since in this world accidental defects and disadvantages attend upon the various modes in which the best directed intentions are carried out, it favored, by the reaction it excited, religious exaggerations and regrettable practices the most opposite to its own.

Towards the end of his reign, Louis XIV. became converted to better sentiments than those of his earlier years, and after suppressing Port Royal, in 1709, compelled the Parlement of Paris, on the 14th February, 1714, to register the bull "Unigenitus."

But the evil previously fostered by the proud and pleasure-loving king had now penetrated too deeply and spread too widely for him to be able to undo the evil he had done, and especially to change the spirit of the Parlement which had so long been jealous of any independent ecclesiastical power, and been encouraged and supported in its disloyalty to Rome. To his amazement, the most absolute and powerful of kings found himself seriously opposed for the first time in the course of his long reign, and that opposition he had been unable to surmount when death seized him in 1715.

The profligate regent, needing the aid of the parlement to set aside the king's will and testament, restored to it the right of remonstrance, of which it had been for so many years deprived, and set free those who had been imprisoned on account of Jansenism. In a short time the parlement took upon itself to order a letter on Jansenism, written by the Archbishop of Rheims, to be publicly burned,

and condemned the Bishop of Soissons to pay a fine of ten thousand "livres" for having declared that the Church was above its decrees.

A large number of the clergy had also become infected with the Jansenist poison, and in October, 1728, Jansenism served as a rallying point for a very diverse set of opponents. In the words of a writer with no leaning to orthodoxy¹, the true Jansenists, the Gallicans, and all the enemies of Rome, united in one movement of opposition to the bull *Unigenitus*, carrying with them the discontented of all kinds—those who desired to fish in troubled waters and the lovers of novelty for its own sake. In July, 1725, the parlement took upon itself to suppress a change in the breviary ordered by Benedict XIII., and in the following year suppressed the papal brief respecting it. Small wonder that, simultaneously, the Jansenist party published its "remonstrances" to the Archbishop of Paris, wherein it was declared that there were circumstances when the pastor was forced to obey his flock, and that if the bishops, or even the Pope, oppressed the truth, it was the duty of the faithful to defend it against them; also, that if the episcopate fell into error, it should be instructed, corrected and even judged by the people. These "remonstrances" were indeed condemned to the flames by the Parlement, but they were none the less the logical consequences of that body's acts, some of which were not a bit less absurd and fundamentally destructive of all ecclesiastical order and discipline. Thus, on the 7th September, 1732, the Parlement decreed that it pertained to it alone to constrain the king's subjects, and that ecclesiastics were answerable to the Parlement (under the authority of the sovereign) for the exercise of their jurisdiction.

Thereupon followed a long period of weak, vacillating and uncertain struggles between the king and the Parlement—weak and uncertain on account of the profligacy and want of principle of Louis XV., and of the gradually increasing influence of the men hostile to all Christianity absurdly called "*Philosophes*." At last, in May, 1753, the Parlement was exiled, and then the evil tendencies which had gradually spread amongst the people made themselves manifest. Papers were disseminated applauding the Parlement and threatening death to the king and the bishops, and that hostility to the clergy generally, now so widely prevalent in France, already began to show itself. D'Argenson, a contemporary witness, tells us that the priests could not show themselves in the streets without being hooted. The next year the Parlement was restored, and the king exiled the Archbishops of Aix and the

¹ *L'esprit Revolutionnaire Avant la Revolution*, by Felix Rocquain, 1878, p. 48.

Bishops of Orleans and Troyes, and in 1762, in spite of the protests of 45 bishops out of 50, the Parlement decreed the dissolution of the Society of Jesus.

In November, 1764, the king himself suppressed it, and thereupon the Parlement of Paris threatened the Pope with vengeance and the enmity of France, while the Chamber of Aix in Provence ordered a decision of the Pope to be burnt on a scaffold by the common executioner. The magistrates of Paris carried their interference with the sacraments to such an extreme as to cause the Viaticum to be borne by force to the sick in spite of ecclesiastical authority, escorted by two of its officers and a lieutenant of police.

Yet, in spite of the encroachments upon the domain of religion, which the king tolerated on the part of his parlements, he did not allow his own authority to be contested. On the 3d of March, 1766, he went in person to the Court of Justice and declared as follows :

"It is in my person alone that sovereign power resides. My courts owe all their authority and even their existence exclusively to me. Legislative power belongs independently and exclusively to me only, and the whole public order emanates from me."

While despotism proclaimed itself thus frankly, irreligion, more or less, veiled its enmity by the most detestable hypocrisy. Voltaire, who published his attacks under false names and denied their authorship, twice sacrilegiously communicated in the church of Ferney (in 1768 and 1769), and we learn from Grimm, that had he resided where he ran any risk of persecution, he would have communicated each fortnight and made a lying show of reverence to every religious procession.

At last, Louis XV. effected a *coup d'état* that introduced a more than ever despotic system, which rested for the last of his reign. The various parlements scattered over the kingdom had begun to correspond, and endeavored to unite themselves as a class forming one indivisible unity. The king, advised by his energetic and little scrupulous chancellor, Maupeou, speedily suppressed this attempt, and after various efforts to enforce submission, put an end to the Parlement of Paris altogether, a "Great Council" being installed in its place on the 24th of January, 1771. The consequent excitement was extreme, and the Court of Aids, presided over by Malesherbes (the future defender of Louis XVI.), offered remonstrances, wherein it dared to ask the king to convoke the States-general of the nation. For this, its president was exiled and the magistrates of the court driven from their seats by soldiery. Towards the end of the year the various Parlements of the provinces were also suppressed. Voltaire, who was no friend to the parlements, rejoiced at their suppression. The king leaned for a

time on such support as he could obtain from the clergy whose power and influence had become greatly diminished, but who became compromised by the action of the government. The enemies of the Jesuits feared their restoration, but Maupeou brought his influence to bear against them, so helping to cause the emission of Clement XIV's brief, which suppressed them (July, 1773), he restoring in return to the Pope Avignon and the County Venaissin which had previously been sequestered by the king whose end was now at hand.

On Wednesday, 27th April, 1774, Louis XV. was seized at Trianon with a shivering fit and a violent pain in the head. The next day he determined to return to Versailles. On the 29th he was bled twice, and on the 30th smallpox manifested itself with very grave symptoms, and soon fifty persons had caught the infection in the palace. His daughters (*Mesdames*) shut themselves in with their father, and Madame du Barry came each day to sit with him, but the king spoke little to her. Political intrigues and court jealousies almost prevented the Archbishop of Paris from even entering the chamber, and would have made the administration of the last sacraments impossible but for the action of the king himself. On the 4th of May, feeling himself growing worse and worse, he caused the Cardinal de la Roche Aymon to be summoned, and asked what the nature of his illness was. When told it was the smallpox he said: "At my age one does not recover from that; I must put my affairs in order."

He had Madame du Barry called, and said to her: "Madame, as I intend to receive the last sacraments, it is not fitting that you should remain. Arrange your retirement with the Duc d'Aiguillon, to whom I have given orders that you should want for nothing."

In the midst of all the intrigues and excitement which ensued, and in spite of the constantly increasing severity of the malady, the king preserved his courage and *sang froid*, repeatedly demanding his confessor, whose access seems to have been impeded. At last he came, and the courtiers, with their watches in their hands, remarked that he was sixteen minutes with his royal penitent.

At seven o'clock in the morning the cardinal just mentioned brought him the Holy Viaticum. As soon as he saw his great Almoner the sick man threw back the coverlet of the bed and endeavored to kneel, joining his hands. When the attendants sought to prevent this he exclaimed: "When Almighty God deigns to visit a miserable man like me, He must at least be received with respect." When he had communicated the Almoner turned and addressed the courtiers present as follows: "Gentlemen, the king being himself unable to speak to you, orders me to say that he repents of all his sins whereby he has scandalized his people."

Then the dying Louis whispered to him, "repeat those words, repeat them."

On the 9th he received extreme unction, and the next day, as the Cardinal pronounced the words *Proficiscere anima Christiana*, Louis XV. expired, and therewith the second act of the drama of the Ancien régime commenced.

The disputes about Jansenism and any general excitement about religious questions had now ceased to occupy the public mind. Serious, definite views as to political reform only existed in the minds of a few clear-sighted men, though there was a widespread desire for the recall of the Parlements and the fall of Maupeou.

The characteristic feature of the epoch was the perfecting of that refined social culture which was known as "*La bonne Compagnie*," or what we should call "good society." The tone of Versailles, and of the "Salons" of Paris, was such as the world had never seen before and probably will never see again. Our readers will recollect the oft quoted words of Talleyrand, to the effect that he who had not known society before 1789 has not known the sweetness of life.

It is true that the French language is *par excellence* the language of conversation, but then it has been made so by a people whose highest classes had for centuries cherished and cultivated the art of conversation, because they had nothing else to do. Great was indeed the contrast between the gentry of England and the court noblesse of France. The former, most religious in their way, resident on their estates, and busy with the many duties of squires, justices of the peace, etc., the latter religiously indifferent, if not contemptuously infidel, miserable if not at Versailles or Paris, never residing on their estates, save when exiled to them, and having neither duties to perform nor influence to exercise when there. As Walpole tells us, impiety was in the air. A sub-lieutenant had to do his Easter duties secretly if he would avoid ridicule, and the grandfather of the actual president of the French Republic had his anti-aristocratic feelings first aroused by military ridicule directed against his "*piété de bourgeois*." M. De Chabannes, handsome, young, and rich, when dancing with Marie Antoinette slipped and therewith made a pious exclamation, which became a nickname which stuck to him after his return from the War of American Independence, and that evil genius of the French monarchy and grandfather of the Comte de Chambord, when as Comte d'Artois he visited Spain, laughed with the young officers, his companions, at Spanish piety, and shocked the court of Charles II.

This revolt against religion and the Church had no doubt been largely promoted by the so-called "philosophers," but it had also its aristocratic side as a distinction from the lower classes without

intellectual culture, for whom piety was good. Anne de Montmorency-Luxembourg, Duc de Beaumont said of himself: "I attend Christian worship because I am convinced of its utility for the people." The same spirit showed itself even amongst the high clergy, who were exclusively aristocrats, in spite of the number of those who edified the world, and especially England, in the days of their suffering and emigration. Amongst the unedifying may be mentioned, M. de Jarente, Bishop of Orleans; M. de Talarn, Bishop of Coutances, and M. Louis de Grimaldi, Bishop of Mans (who would wear his hunting dress under his vestments at Mass); the Archbishop of Narbonne, and especially the Archbishop Leomenie de Brienne, afterwards cardinal. He is related to have said to the Abbe de Boisgelin, who had incurred the disgrace of a scandal necessarily prejudicial to his advancement: "Why did you not wait—till you were a bishop?"

But in spite of the apparent elegant trifling and regrettable religious indifference or worse, there was a considerable taste for social progress and quite a passion for scientific knowledge.

The advance of physical science during the reign of Louis XVI. was remarkable, but even more so the extent to which it became a fashion of the day.

The chemist, Fourcroy, had twice to seek a larger amphitheatre, so great was the crowd of gentlemen and elegant women who attended his lessons. Antony Petit's course of anatomy was so crowded that even the windows were used as seats. Geology and zoölogy were taught by Buffon, electricity by Nollet, astronomy by Lalande, and the doctrines learned during the day formed the subject of conversations at the renowned suppers of the period. Deparcieux was invited each year to the chateau of Brienne, where he found a collection of natural history and physical instruments for his use during the course of lectures he had to give to the ladies who passed the summer with the cardinal. The names also of Coulomb, Malus, Lavoisier, Berthollet, Guyton de Morveau, Daubenton, Bichat, and Lamarck should not be omitted, and certainly not those of Antoine de Jussieu and Romé de Lisle, immortally connected with botany and crystallography.

Meantime the privileged classes, though ready enough to coalesce against attack from the unprivileged, had much jealousy among themselves. We have seen the hostility of the parlements to the Church, and there was a strong antagonism between the provincial noblesse and that which resided at the court or in its vicinity. There was an increasing outcry against abuses, but hardly one individual was willing to accept a reform which put an end to those abuses by which he himself profited.

The young king, Louis XVI., was full of good disposition, but,

as our readers know, had a terribly weak character. Moreover, he was strongly impressed with his rights as an absolute monarch, and quite unwilling to surrender any of them. He was also scrupulous to a fault as to any interference with property not absolutely inevitable, and the feudal rights of the seigneurs were a form of property. It was natural also that he should sympathize with that class to which all his intimate friends belonged, as also that he should partake of that mode of regarding "privileges" which was common to the society of which he was constituted the head and summit.

He came to the throne on the 10th of May, 1774, amidst transports of delight which manifested themselves far and wide.

The Chancellor Maupeou's *coup d'état* of 1771, was not only a restoration of absolutism, but he also sought to consolidate all those institutions which had formerly supported it, and to remove from them all liberal innovations. He restored the venality of municipal offices, returning to the system inaugurated in the worst days of Louis XIV., and applied retrograde principles to all the branches of government and administration. For all that, France was then, through the habit of nearly two centuries, so docile that her discontent, for the most part, only showed itself in the witty sayings of the salons and some pamphlets; so that the chancellor was confident and triumphant till death removed his master.

Then the friends of progress felt hope revive, and expected reforms and ameliorations from the well-known goodness of heart of the young king. And the opportunity was great indeed. The Empress Maria Theresa at once wrote to the French queen, her daughter, as follows:

"France has immense resources; there are, indeed, enormous abuses, but they are now themselves a great resource, since their abolition will ensure benedictions from the people. The perspective before you is grand indeed." Such was truly the case.

The first act of the young sovereign was to dispense with his right to "joyous accession," which was indeed a gain of 40,000 livres to those who would have had to pay it, and the queen similarly renounced her right to the "Royal Girdle," an act which caused the writing, by an unknown hand, of the word *Resurrexit* on a pedestal of Henry the Fourth's statue.

Unfortunately the king called to his aid the frivolous old Comte de Maurepas—a man whose sympathies were entirely with the abuses and corruptions of the old system. To the delight of the Parisians, who illuminated, the king exiled Maupeou, who was burnt in effigy by the populace, and summoned to his ministry the celebrated economist Turgot, who was everywhere esteemed as an honest man, and had been adored in Limousin, of which province

he had been the intendant. His first act was to establish free-trade in grain throughout the interior of France, and his next was to do away with those systems of forced labor known as *Corvées*. But he was a strong advocate of absolute power, and desired a "patriot king."

He joined with Maupeou, the Archbishop of Paris, and other bishops, in urging the king (with much reason, as we shall see) not to restore the Parlements, and he desired to establish a universal system, or hierarchy, of municipalities—not elected, but nominated—with a grand national municipality in the place of the States-general—to the convocation of which latter he was strongly opposed, as tending to deprive the king of much of his absolute legislative power. He thus, in some respects, ran counter to the national aspirations, and he did not take sufficient account of the traditions and social customs which had grown up and so long existed in France. He was not possessed of Catholic sentiments, and had even conceived the idea of national secular education. He also took small account of the dispositions of men likely to suffer from his proposed reforms. Financiers, courtiers, men who lived by abuses, and not a few of the clergy, therefore coalesced against him, and on the 12th of May, 1776, the king yielded to the various influences brought to bear against his ministers, and dismissed Turgot.

With him disappeared every well-grounded hope for the peaceful transformation of the *Ancien régime*—a transformation afterwards rendered absolutely impossible by the action of the Parlements.

In spite of Turgot, the Parlements were restored soon after his nomination as minister, Louis XVI. causing letters to be written to all the exiled magistrates to direct them to appear at their palace in their official costume on November 12th, 1774. There and then the king held a "bed of justice," whereby he restored the old order of things, destroying the work of Louis XV., and gave the nation a conspicuous triumph at the expense of royalty.

His action necessarily caused discontent to those who had suffered from the tyranny of the Parlements, and the Archbishop of Paris, who had trusted that at least the control of matters ecclesiastical would have been withdrawn from the restored Parlement, did not disguise his disapproval. Thereupon Louis XVI. gave him to understand that if he caused trouble to the government he would not, as his grandfather had done, limit himself to a sentence of exile, but would hand over the archbishop to all the severity of the laws.

The restored Parlement soon justified the dislike which Turgot had manifested to its restoration. It refused to register his beneficent edicts. He sent a deputation to beg the king to retract them,

and made the following singular declaration: "The occupation of the nobility is to defend the country against its enemies, that of the clergy is to edify and instruct the people, while the duty of the rest of the nation (incapable of performing such lofty services) is to pay taxes, promote industry and carry on manual labor."

It seems to have been after these representations that Louis XVI. said: "I see very well that there is no one but Turgot and I who really care for the people."

For a time the king persevered, and on the 12th of March, 1776, forced the Parlement to register, holding a "bed of justice" for that purpose, to the delight of the masses, who were transported with joy. But very few, save the lower classes, supported the minister who fell through aristocratic opposition and intrigue and the hostility of Marie Antoinette. Turgot was bound to enforce economy by the bad state of the finances, but the queen prevailed on the king to give to her favorite, the Princess de Lamballe, a sinecure post with 150,000 livres of income, and finally, offended by Turgot's recall from the London Embassy of a friend of hers, the Comte de Guines, obtained his dismissal, though her desire that he should be imprisoned in the Bastille was not gratified.

Then the king undid the work of Turgot as he had previously undone the work of Louis XV., thus discrediting his own authority in the eyes of the nation. Finally, after the first ministry of Necker, he accepted and authorized a frank movement of reaction under Maurepas and Joly de Fleury, thus destroying his first chance of dominating and directing the revolution which had become inevitable, but might have had a very different character from that which it subsequently presented.

Indeed, Louis XVI. had the opportunity, if he had had the intelligence and the requisite firmness of will, of acquiring even more power than Louis XIV., and of becoming a legitimate and peaceful Napoleon, but with far more stable authority; as the traditional loyalty and reverence of the French nation would not have been weakened.

But it would have been foolish to expect Louis not to have been the son of his own age; and yet he might have been more, for Mirabeau was *much* more, yet even Mirabeau would not have understood the first requisite of political success, which was a true religious reform—and true religion was far from being in fashion at the close of the eighteenth century.

The first requisite was, no doubt, a new concordat with Rome. In exchange for a salutary legal extension of papal power in the country and real reform in the abolition of pluralities and other crying abuses, there is little doubt but that such a rearrangement of Church property could have been effected as would have produced

an augmentation of the poorest benefices, an increase in the sums already devoted to charity and instruction, as well as some relief to the overburthened exchequer by an equality in taxation. At the same time serious reforms might have been effected in certain religious houses—possibly with some suppressions.

The second requisite was to abolish the exemption from taxation of the nobility, to do away with their oppressive feudal dues, and to make their distinctions, as a caste, purely honorable, while at the same time giving to them in common with the higher members of the third estate, duties to fulfil analogous to those fulfilled by the higher classes in England. Had it been possible for them alone to have borne all the costs and charges of the army and navy, they might, on the condition that they did so, have continued with justice to enjoy their exemptions and dues. But, as such a thing could not have been endured by them, they might have been fairly called upon, since they had ceased to play that part which they had effectually played in feudal times, to give up privileges which entailed no corresponding sacrifices, and to pay their taxes like the rest of the community.

Such a measure would have caused the mass of the nation to support the king with the greatest and most effective enthusiasm, but would have met with the most determined opposition from all the parlements of the realm. It would have done so because the Parlements were essentially aristocratic institutions, and their noble members themselves enjoyed the very immunities in question. That they would have opposed such reform is certain, because, as we shall see, they did, in fact, oppose with all their might reforms tending in that direction which were presented for their acceptance.

They would have coalesced with the rest of the nobility; and doubtless a large number of the higher clergy (who were all nobles also) would have supported them, and together they might have been able—and they certainly would have tried—to excite a civil war, their great wealth necessarily giving them the command of many men.

Therefore, to have secured that predominance which Louis XVI. might have secured, two preliminary efforts were necessary: One of these was the opening of the Parlements freely to the members of the “*Tiers-Etat*,” and the effecting of a gradual but decided predominance within them of that third estate, at the same time depriving them of all control over matters ecclesiastical, and reducing their function of registration to that merely formal character, of an official publication, which it originally possessed.

The other preliminary need was the introduction of such changes in the organization of the army, and such ameliorations in the treatment, especially as regards food, of its “rank and file” as might

have secured its discipline and fidelity to the crown under all circumstances. The first condition of such fidelity was the throwing open of all commands to the third estate, with the occasional promotion of men who had shown themselves good and capable soldiers, and every way worthy of trust.

Unhappily for France a directly contrary policy was pursued by the king and his government after the fall of Necker, when Maurepas and Joly de Fleury entered upon a course of frank reaction.

In the first place, instead of insuring the fidelity of the army by popularizing it, a regulation was made, in 1781, which required of every one who should aspire to be an officer of either infantry or cavalry, a formal proof of four degrees of nobility, without counting the applicant's own. There was but one exception, that made in favor of the sons of knights of St. Louis. When Louis XV. came to the throne no such restriction existed. Any man could become an officer without proving even one degree of nobility. In 1750, so far from closing the door against the just emulation of the third estate, the king not only kept this door open, but promised to bestow on commoners who were officers of distinguished merit, the much-coveted recompense of hereditary nobility.

The irritation which the regulation of 1781 excited amongst the members of the third estate is not to be described, and, as we shall see, it did not render the nobility any more devoted to the support of the king's government.

But the reaction was by no means confined to matters military. Whereas, formerly very distinguished members of the higher clergy and the magistrature had been members of the third estate, no members thereof were any longer tolerated in either of these bodies. Bishoprics were declared to have been made for the benefit of "persons of quality," and the court decided that henceforth none but nobles should be appointed abbots or vicars of religious houses.

After the army regulation of 1781, the Seigneurs, from one end of France to the other, began to examine into their feudal rights, with the intention of restoring to their full vigor any which had fallen into desuetude or neglect. In this they were efficiently served by the Parlements, whose sympathies were entirely with the aristocracy. Even the ancient custom of making vassals kneel and swear fealty to their seigneurs, was at least occasionally re-introduced.

By the intervention of the Count d'Artois, Calonne was made minister—a man of many resources and great dexterity—but (as our readers no doubt recollect) he found himself unable to re-establish order (owing to the disorganized finances of the state) without taxing the privileged orders. As a means of effecting

this, he devised the plan of convoking an assembly of "notables," the moral force of which would, he hoped, overcome any resistance on the part of the Parlement of Paris. He had thought of convoking the ancient "States-general," but, according to their old plan of voting, by "order" and not by "head," he feared that such a convocation would but furnish the nobility and clergy with an opportunity of re-affirming and establishing, more forcibly than before, their privileges and exemptions. The idea of forming any kind of deliberative assembly was a great innovation, and one which Mirabeau affirmed that he had suggested to Calonne. The latter flattered himself that the members of the assembly, being selected by the king, would, for the most part, be so gratified by the honor done them, that they would show their gratitude by a complete subservience to the royal wishes. He took no account of the reactionary spirit which had shown itself on all sides since the regulation of 1781, while he counted too much on the king's power and resolution.

The assembly of notables was composed as follows: There were seven princes, 39 nobles, 12 members of the Royal Council, 11 clergymen, 33 members of different Parlements, two members of the Court of Accounts and two of the Court of Aids, 12 deputies from provincial states, one civil lieutenant and 25 municipal officers—144 in all.

Calonne, himself an aristocrat and a minister who had sought, by all possible means, to gratify the Court and avoid the reform of prodigalities, was driven, by dire financial necessity, to frankly seek toleration in the reform of abuses and the abolition of immunities from taxation. It was strange, indeed, then, that for this purpose he should have had recourse to an assembly, the members of which, benefited by such abuses, attached an extreme importance to their conservation, not only on account of their pecuniary interests, but also through the pride of caste. The assembly was designed to overpower the resistance made by the magistrates (in their Parlements) to reform, and, nevertheless, no less than thirty-eight of them were summoned to it.

Yet, Calonne did not hesitate to address the most forcible words to this almost hopeless assembly. After making clear the utter disorder of the finances, he said: "What resources have we left, to supply all that is wanting. . . . The abuses! Yes, gentlemen, it is in those very abuses that a fund of wealth exists, of which the state ought to make use to re-establish order. It is in the abolition of abuses that we can attain the one means of supplying all our needs. It is from the bosom of disorder that a supply may be obtained which will fertilize all parts of the monarchy." . . . "The abuses are only supported by private interests, the wealth and

consideration of individuals and antique prejudices, which time has permitted to survive ; but what can their vain confederation effect against the public welfare and the necessities of the nation ? The greatest abuse of all would be not to attack abuses, save those in which only the weakest members of the community are interested. It is those which are the most considerable and the most protected which we must now annihilate. It is those which bear most heavily upon the laborious and productive classes."

As our readers know, with the exception of a vote in favor of causing all proprietors to contribute to the maintenance of public roads, the assembly was dissolved on May 25th, 1787, without agreeing to recommend any real reform. Calonne meantime fell, and was succeeded by the Archbishop Leomenie de Brienne.

The unpatriotic conduct of the notables was less wonderful, because, in the first place, the third estate had as yet given little sign of life, and the mass of the people continued tranquil and passive, while, in the second place, pamphlets were daily published in order to stimulate their resistance, and, as usual in France, some of them assumed the form of *jeux d'esprit*. One such has been preserved by Sallier, which ridiculed the prime minister's warning to the notables that they had been summoned to advise him, not as to the substance (*fonds*) of reform, but as to the fashion of carrying it out. It runs as follows :

"In those days Calonne said to his disciples: 'The Kingdom of France is like unto a father of a family, who, having assembled in his courtyard his various domestic animals, spoke to them as follows :

'My dear good friends and very worthy creatures,
Fowls, ducks and chickens, pigeons, geese and turkeys,
Be good enough to put your heads together,
And thence draw forth your very best of reasonings,
Freely debating, long as you may wish to,
About the project which I have in hand,—
About its fashion, not about its substance.
The first and most courageous of my servants,
Moved by a great desire of purest goodness,
Tells me that you by Heaven have been created,
All for my glory and to grace my kitchen,
I am, therefore, about to cook you all ;
That is the manifesto I put forth,
But pray select what sauce shall be employed,
For all the rest I on my cook depend.'"

With the disappearance of the notables, the Parlement of Paris came forward in vexatious opposition to the attempts of the Government to somewhat extend the area of taxation, by means of a land tax and a stamp act. On the 16th of July, 1787, it assembled

to prepare an address to the king, begging him to withdraw his edicts. They also asked that an account of the "states" of receipts and disbursements might be communicated to them. All of a sudden a voice was heard to cry out: "It is not states of receipts and disbursements we want, gentlemen, but the 'States-general.'" The idea met with a modified acceptance. The Parlement did not refuse the stamp edict, but rather excused itself from either accepting or rejecting it, by adopting a formula likely to carry with it very grave consequences. Its words were: "The nation alone, as represented in its States-general, can give the necessary consent to taxation. The Parlement has not the power to give that consent. . . . Charged by the sovereign to announce his will to the people, it has never been charged by the people to act as its representative." Thus the Parlement actually accused itself of an usurpation which it had practiced from time immemorial; abjuring in a single day (either for the sake of opposing the government, or yielding to a patriotic movement) pretensions which it had been pushing further and further for centuries. But subsequent events showed clearly that the Parlement of Paris, and all the other Parlements, were far more concerned about maintaining the dignity and augmenting the power and wealth of the privileged classes than about the welfare of the nation generally.

These classes made war freely on the king's government, and did not, as we shall see, hesitate to promote revolutionary disorder in order to paralyze it. Their own wish was that they themselves should profit, and profit exclusively, by the lowering of the royal authority.

Thereafter ensued a prolonged struggle between the government and the Parlements. On the 6th of August, 1787, a bed of justice was held at Versailles, whereat M. d'Aligre, the president of the Parlement, in protesting against the proposed laws, affirmed that they tended to engender discord between different members of the same family, and between "seigneurs" and "vassals." This was where the shoe really pinched. The proposed laws not only taxed the seigneurs, but allowed their vassals, assembled in parish meetings, to see that the charges were distributed equitably. On the 13th of the same month the Parlement assembled and passed another resolution, in which it re-affirmed that the king could not lawfully impose a tax without having previously convoked and consulted the States-general. In the preamble to this resolution, however, the magistracy made clear what was their secret thought in calling for the States-general. Therein they declared it to be "contrary to the primitive constitution of the nation and to its principles, which would be adhered to by the States-general, that the clergy and the nobility should be submitted to a territorial tax,

together with the commons, and that it had been reserved to our days to see such a system proposed." The Parlement thought that, thanks to an observance of the ancient custom of the States-general voting by "orders," the clergy and nobility, having two votes to one, would certainly maintain their existing privileges, even if they could not acquire new ones.

For this end they, as before said, did not scruple to make use of revolutionary means. It had always been the custom to keep their proceedings secret, but they had now accustomed the public to be told their resolutions as soon as passed, and a crowd was encouraged to wait in the halls of the building and applaud the members as they came forth from the great chamber. The people came to regard such information, not as a favor, but as a right, and thus, on one occasion, the Archbishop of Paris (who as duke and peer had a seat) was insulted for refusing to reply to such questions, in spite of his well-known benevolence and virtue. Already a precedent was thus established for those tumultuous demonstrations whereby the mob influenced, and sometimes dominated, the decisions of the future national assembly. On the 13th of August, no sooner had a conspicuous opponent of the ministry, M. d'Epremesnil, appeared than he was seized and carried in triumph to his carriage by a tumultuous movement, just as others had been howled at and hooted.

There is no space in this article even briefly to discuss the struggles which took place between the weak and divided government of the king and the perversity of the parlements.

In a few days, that of Paris was exiled to Troyes, but was recalled on the 20th of September, 1787, having in the meantime been energetically supported by provincial parlements. At last, in May, 1788, came the *coup d'état*, which again, for a time, put an end to the parlements in favor of a "plenary court," thus once more returning to the system of Maupeou, in the last years of Louis XV. But this time the new court was still-born, and the government had to struggle on till it restored the parlement on September 24th, after which it continued till, having lost its popularity, it was finally destroyed by the Revolution.

Meantime, great and important changes had taken place in the provincial organization and administration in France—changes which served to show on the one hand the persistence of the higher orders in maintaining their privileges generally, and on the other hand the fruitful results of more moderate and patriotic conduct on their part in the Province of Dauphiny. The idea put forth by Turgot, of giving provincial assemblies to the whole of France, had been modified and submitted to the assembly of notables by Calonne in February, 1787. His proposition was that a local assembly should

be instituted in every province which had not preserved its ancient provincial "estates." In these new provincial assemblies there was to be no distinction of orders; that is, the members were to deliberate together, and votes were to be taken by counting heads.

Now, the nobility and clergy were well-disposed, indeed, to welcome provincial assemblies which might checkmate the despotism of the intendant of each province, who was appointed by the king. They wished this as they also desired the States-general, in order also to checkmate the despotism of the ministry. Nevertheless, they understood by such bodies assemblies organized in their own fashion, with a two to one preponderance for themselves. No wonder, then, that they were opposed by the notables and by the Parlement, but the decree establishing them was, nevertheless, registered in June.

They encountered, also, much local opposition. Thus the Province of Hainault protested against the decree, alleging that formerly these were regular provincial "estates," of which they had only been deprived by an abuse of royal omnipotence. Therefore, since Louis XVI. wished to undo the faults of his predecessors, he was entreated to restore them the old order of things, modified by the needs of the time. This prayer was acceded to, and on the 8th of February, 1788, a royal declaration was registered by the Parlement of Douay, according to which the estates were to be restored, but the members of the third estate were to be twice as numerous as either of the others, while they were to deliberate in common and vote by counting heads.

The same claim was advanced by Dauphiny with important consequences, as will appear later on.

The Province of Guyenne never possessed "estates," but the Parlement of Bordeaux none the less opposed the June decree as an attack on aristocratic privileges. Though exiled, it defied the government, refused to register, and invoked an assembly of the States general.

The Parlement of Besançon opposed the decree as applicable to Franche-Comté, making use of violent and revolutionary expressions, such as that "the measures proposed may break the ties of attachment between subjects and their sovereign." The Parlement of Rennes also used no less violence, suppressing and condemning any publication they disliked, while publishing statements not only violent, but false, as to the expenses of the royal administration.

Nevertheless, towards the end of 1787, the provincial assemblies began to meet in those provinces in which their union had not been prevented by the opposition of the local Parlements. The arrangement was that half the members were at first to be nomi-

nated by the king, and these were to elect the other half; then, every year one-quarter was to retire and be replaced by others, who were to be chosen according to a very complex system of election.

But the system of royal nomination disappointed its authors. It was not from members of the third estate that any special opposition came. It was the nobility and clergy who offered opposition, on the ground of the power still left to the royal "intendant" of each province. Thus the Duc d' Ayen wrote from Haute-Guyenne to the prime minister: "It is impossible for me to express the disgust and consternation of the members of the assembly, or how the desire to become members of it and the zeal of all the best citizens is being extinguished."

The archbishop and duc of Rheims protested very vehemently against the presence of the intendant, and still more of his delegates in the assembly. It was not the members of the third estate who made these objections. It was the "grands seigneurs" and the Church dignitaries alone, who were so shocked at the presence of the royal functionaries.

Often aristocratic influence succeeded in overcoming that of the prime minister. Thus the intendant of Lyons, having become engaged in an obstinate and acrimonious dispute with the assembly of the province, great lords and prelates made use of their influence at Versailles, and succeeded in forcing him to submit. The most interesting and instructive local conflicts between the waning royal power, the aggressive aristocratic spirit, and the nascent modern desire for freedom were those which took place in Bearn, Brittany, Dauphiny and Province, but we have not space here wherein to present even the slightest sketch of their most salient features. We propose to describe those struggles, and the last efforts due to the obstinacy of the privileged orders, down to the fusion of all in the national assembly, in a second article, which will conclude what we have to say on what we deem an instructive and deeply interesting subject.

ST. GEORGE MIVART.

OUR CONVERTS.

DIVINE faith is a certain and undoubting assent to revealed truth: "the substance of things hoped for, the evidence of things not seen."—*St. Paul*. "The commencement, foundation and root of our justification."—*Council of Trent*. "It is faith that saves us, because it is the perfection of our good works, as well as their principle."—*Bourdaloue*. Although, when we have once truly received divine faith, we can say with *St. Paul*, "I know in whom I have believed, and I am *certain*"; yet it is clear, upon reason and theology, that the truths of revelation are not of themselves self-evident; and hence cannot, of themselves, constrain the mind to belief. Human intelligence and divine grace, the former prepared by some study of the mind, and the latter moving the soul, are necessary to impose the obligation of believing. Divine faith is a supernatural gift, coming alone from God. How small a proportion of human beings, compared to the whole, have been able to receive it! The late Father Hecker, and other eminent Catholics, hence have believed that Christianity is yet in its infancy. Perfect as it was, as it came from our Saviour, its apostolate among men, its history, the fulfilment of its divine mission, its progress towards uniting all in the one fold, are so unfinished as to be but beginnings. To that great majority of mankind not yet receiving divine faith, Catholic theologians have exercised signal justice and charity. We know the possibility of divine grace and faith pervading every human soul on earth. Heresy is only such, according to *St. Thomas's Summa*, when it is error *perstinaciously* maintained and *manifestly* against the faith. It is clear, according to all Catholic theologians, that all such, whether pagans or Protestants, who are in good faith and sincerely desirous of knowing the truth, are claimed as belonging to the soul of the Church. *St. Augustine* said that men must be drawn not forced to the truth; and *Cardinal Manning*, in his *Vatican Decrees*, etc., said, "faith is an act of the will, and to force men to profess what they do not believe is contrary to the law of God, and to generate faith by force is morally impossible." It required the most forcible decrees of Popes to arrest the subjection of the northern nations of Europe by military force to profess the faith, as was done by the two Olafs, Kings of Norway, who would challenge a whole nation to receive baptism, or fight.¹ The very nations thus

¹ *Bollandists, Acta Sanctorum.*

converted by force were the first to apostatize in the sixteenth century.

If then inculpable ignorance and good faith bind so large a portion of mankind to the soul of the Church, what shall we say of those favored souls, born and educated without, but now become enriched with the grace of divine faith, and whose good deeds are made perfect by faith? How easily does faith come to us Catholics, who have received the inheritance! But the triumph of faith is most sublime, where it is acquired by sufferings, sacrifices, trials and heroic self denial! Our converts are those who have been born and educated outside of the body of the Church, who by their good faith have belonged to the soul of the Church, and who by divine grace and their own superior efforts, have fought their way into the body of the Church; those who, perceiving the light of truth, embraced it. In every age and country has the Church honored her converts, and has entrusted to them high and holy missions in the great work of saving souls. And this too, in spite of certain prejudices against converts in general which exist even among Catholics. In countries, where the faith is universally accepted, and where the pastoral office is consequently limited to the guardianship of the organized flock—"for I know my sheep and my sheep know me"—the missionary spirit is not called into active effort, and consequently the zeal of Christian propagandism weakens; the good faith of outsiders is not trusted, and even converts are coolly regarded and often distrusted. But in countries like our own, where the Church is militant, and where her divine mission to teach all nations is her normal condition, conversions mark her conquests, and converts are welcomed as heroic co-laborers in the great mission of the future. It is true, we do not see in our day such conversions as those of St. Paul and of Constantine the Great, by miraculous signs and wonders in the heavens: but each conversion now, as then, is a miracle, either in the natural or the supernatural order. And each convert, like St. Paul and Constantine, has a special mission in the grand economy of salvation. With the great body of our converts, though fruitful, their missions were modest and humble; but many there are, who, by their learning, eloquence, writings and good works, have made the faith shine in the firmament and before the eyes of men, both priests and laymen; champions of the truth which they so heroically embraced, and heroes of Christian charity. According to St. Thomas they were probably never heretics.

Theories which group conversions into movements and trace them to a common historical cause, are interesting and instructive. While in England the advent of the *émigré* clergy from France is supposed to have led to the great Oxford movement, which cul-

minated in the conversion of John Henry Newman and a host of other English divines, it would be difficult to trace a similar cause and effect in America; even though a Bruté, a Dubois and other exiled French confessors of the faith came and joined the missionary labors of the infant Church in the infant Republic; and even though the writings of the Oxford Tractarians were not unstudied in this country. Yet it must be acknowledged those individual conversions, such as that of Dr. Ives and perhaps those of Father Preston and of Bishop Curtis, may have been influenced by the Oxford tracts. The general fact with American conversions has been that they were individual. Each convert, no doubt, exerted an influence upon his family, his friends and his social circle; and there was scarcely a conversion that did not lead to another, or to many. Each conversion was a little movement in itself. A pebble thrown into the waters of the smallest rivulet makes its splash and its ripples; it is said to be susceptible of scientific proof, that its movement is felt across oceans and in the remotest waters of the earth. So it is with the conversion of the humblest soul returning to the centre of truth and unity!

In 1776 the Catholic population of the colonies struggling for freedom was estimated at 25,000 in a total population of 3,000,000, or $\frac{1}{120}$ of the whole; we have no record of there having then been converts among those 25,000 Catholics. In 1790 we had 30,000 or more, probably 32,000 Catholics, or $\frac{1}{107}$ of the whole; in 1800 we had 100,000, or $\frac{1}{33}$; in 1810 we had 150,000, or $\frac{1}{48}$; in 1820 we had 300,000, or $\frac{1}{32}$; in 1830 we had 600,000, or $\frac{1}{21}$; in 1840 we had 1,500,000, or $\frac{1}{11}$; in 1850 we had 3,500,000, or $\frac{1}{7}$; in 1860 we had 4,500,000, or $\frac{1}{7}$; in 1878 we had 7,000,000, or $\frac{1}{6}$; and in 1890 the official census of the United States shows the entire population to have been 62,885,548, while the Catholic population was estimated at 12,000,000. One of our bishops placed it at 14,000,000. It would be impossible to estimate the number of converts to the faith in this 12,000,000 of Catholics—would that we could approximate to the number! There are few Protestant families in America that do not count one or more Catholic converts at their homes or amongst their immediate connections; such has been the case with the families of General Ethan Allen; Presidents Madison, Monroe, Van Buren and Tyler, of Henry Clay, Daniel Webster, General Grant, of General Winfield Scott, Edward Everett, of Nathaniel Hawthorne, and of many other equally distinguished American Protestant families. Our statistics are meagre; but we have a few. In 1853, Archbishop Hughes confirmed at one time 236 persons in New York, of whom 36 were converts, or nearly $\frac{1}{6}$; out of 65 persons confirmed on one occasion in Ohio nine were converts, or about $\frac{1}{8}$; Archbishop Henni, of Milwaukee, con-

firmed on one day 150 persons, of whom 21 were converts, or about $\frac{1}{7}$; and during a period of five years Archbishop Spalding, of Baltimore, confirmed 22,209 persons, of whom 2752 were converts, or about $\frac{1}{10}$. In the prison and hospital for Confederates captured in civil war no less than 600 were baptized. There was a single congregation in North Carolina, which was composed entirely of converts. A list of prominent converts published a few years ago contained nearly 700 distinguished names. Estimating the number of converts from July 4, 1776, to the present time, and the descendants of deceased converts within that time still remaining Catholics, upon the basis of this 700 distinguished names being one-twentieth of the whole, we would now have the converts of to-day and the descendants of all converts since the Declaration of Independence, amounting to 700,000. Again, we may now, in 1893, safely estimate the entire Catholic population of the United States to be 14,000,000; estimating the entire number of converts at this moment, and their descendants remaining faithful to the Church of all converts since the Declaration of Independence, at 20 per cent. of the whole number of Catholics in the country, we would again find the whole number to be 700,000.

This number represents the convert element in our Catholic population of 14,000,000 in 1893, which shows the glorious and triumphant gains of the Church from the Protestant sects. It is a significant fact that few converts have been made by the Catholic Church in this country from the ranks of infidelity, atheism, deism, and other schools rejecting Christianity. The Protestant sects, those professing Christianity and struggling for the light of truth to the best of their opportunities, have yielded up to the Church, from the bosom of error, this goodly army of sincere and devout Catholics. Episcopalians by their love of religious antiquity and episcopacy, Presbyterians by their ardent advocacy of the principle of ecclesiastical authority, Methodists by their intense culture of the personality of God and of the Saviour, Puritans by their hatred of Erastianism and opposition to what they took to be idolatry, the zeal of Evangelicals against mere formal religion, and other sects, while blindly rejecting many revealed truths, yet cherishing some particulars of true religion, have proved themselves nurseries of conversions and promoters of some beautiful features of Christian truth, and probably themselves may prove to be the links by which all Christians will some day be brought into the one fold of Christ. When we consider the extent of this element of converted Catholics only in our own country, there is great and pregnant hope for a united Christendom.

In the paper which I read before the Catholic Lay Congress at Baltimore, in 1889, I expressed the opinion that the list of 700

prominent converts might probably have been raised to 2000. When it is considered that the body of American converts have given to the Church eleven of her eminent members of the hierarchy, and including Bishop Northrop, the son of a convert, twelve, and four of these were archbishops, we must acknowledge, not only the numerous constituency standing at their backs, but also the zeal, the faith, the learning, the charity, the fidelity, the apostolic spirit, which pervade the entire body of American Catholic converts. With the aid of the list of 700 prominent Catholics, and my own memory and data at hand, I will give a list of the most eminent members of our fold who have come to us from without the Catholic Communion. But I cannot claim that it is complete or faultless. Col. Lionel Britten, Rev. John Thayer, Rev. Prince Gallitzin, Gov. John Sim Lee, Adam Livingston, Eliza A. Bayley, Revs. Daniel, Virgil and Samuel Barber, Fanny Allen, Col. Dodge; Archbishops Whitfield, Eccleston, Bayley and Wood; Bishops Rosecrans, Tyler, Young, Wadhams, Becker, Gilimour and Curtis; Orestes Augustus Brownson, Levi Silliman Ives and Mrs. Ives, a daughter of the Protestant Episcopal Bishop Hobart; Stephen C. Blyth, Stephen Burrows, Rev. John Richards, a Methodist minister; Rev. John. Kewley, pastor of St. George's Church in New York; Rev. F. E. White, Rev. George E. Ironside, Rev. Samuel F. Jarvis, Rev. Maximilian Oertel, a Lutheran minister; General William Starke Rosecrans, a brother of Bishop Rosecrans; Capt. George Deshon, now a Paulist priest; Gen. Eliakim Parker Scammon, Col. Charles Larned, Capt. Haldeman and Lieut. Joseph C. Ives, of the Army; and Commander Ward and other officers, of the Navy; Rev. Isaac T. Hecker, founder of the Missionary Priests of St. Paul the Apostle; Rev. Augustus F. Hewitt, Rev. Mr. Homer, Rev. Mr. Wheaton, Rev. Thomas S. Preston, Rev. Mr. Whitcher, Rev. Jedediah Vincent Huntington, Rev. William Henry Hoyt, James A. McMaster, Dr. Thomas Addis Emmet, Dr. Edward L. Keyes, Rev. Donald X. McLeod, George D. Wolf, Gov. Peter H. Burnett, Hon. Lemuel Sawyer, Gen. John E. Newton, Gen. Charles P. Stone, James A. Williams, Major Strobel, Rev. James Kent Stone, now Father Fidelis, of the Pasionists; Mrs. Emma I. Mason, Fathers Searle and Hill, Rev. Clarence Alphonsus Walworth, Father James Clark, S.J.; Father Shaw, S.J.; Mrs. Sarah Peter, Mr. and Mrs. George Parsons Lathrop, Sarah M. Brownson Tenney, Mrs. Anna H. Dorsey, Mrs. Madeleine Vinton Dahlgren, Miss Eliza Allen Starr, Mrs. Waggaman, a sister of President Tyler; Mrs. Connolly, Mrs. Starr, now Mother Veronica of the Sisters of the Divine Compassion; Mrs. Elizabeth F. Ellet, Dr. Henry James Anderson, Lucius Northrop, father of Bishop Northrop, of Charleston, S. C.; Messrs. Major, two brothers, one of whom wrote his

"Reasons for Becoming a Catholic"; Dr. McLaughlin, of Oregon, head of the Hudson Bay Company; Gen. Hill, Mr. and Mrs. Edward Ives, Miss Fanny Becham, of Virginia, now Mother Superior of the Visitation Convent, at Georgetown; Rev. Alfred Young, Rev. Father Tillotson, Rev. Father Baker, Col. George Bliss, Mrs. R. O. Glover, who was a descendant of the Leslie who drove Catholics from New York in 1688-9; Rev. Thomas V. Robinson, Rev. Henry H. Wyman, Rev. Clarence E. Woodman, Rev. Algernon S. Brown, Rev. Lewis G. Brown, Rev. A. R. Nevins, Rev. T. Cyril, of the Passionists; Rt. Rev. George H. Doane, Mr. and Mrs. Oliver P. Buel, their son and daughter, the former being a Jesuit; Mary Agnes Tincker, Charles Warren Stoddard, Miss Hemenway, Mrs. Laura Keene, Rev. Thomas Henry, Rev. F. Matthias, Rev. J. C. Russell and five children, Gen. Foster, Professor Oswald Dorsey, Misses Kane, Mrs. Julia Gardiner Tyler, widow of President Tyler; Dr. W. H. Van Busen, Rev. Pierce Connolly and Mrs. Connolly, Franklin H. Churchill, Rev. Calvin White, Rev. Charles D. French, Thomas Walley, uncle of Wendell Phillips, and his grandson, Dr. James Robie Wood; Madame Octavia Levert, of Alabama; Rev. George F. Haskins, Hon. Thomas Ewing, United States Senator and Secretary of the Interior; Messrs. Beckwith and Weichmann, Mrs. John Barry, wife of Commodore Barry, of the United States Navy; Mrs. Andrew Jackson, wife of a revolutionary soldier; John Bowman, Robert Lee, of Kentucky; Dr. John Millon Harvey, Miss Mary Elizabeth Wagner, Miss Mary Ignatia Forney, Mrs. John Ely, Rev. Sam'l Cooper, Mr. Strobel, our consul at Bordeaux; John Douglass, Hayden Smith, Miss Alden, Rev. George J. Goodwin, Capt. Bela Chase, Colonel Hyde, Messrs. White and Nichols, of Vermont; G. G. Smith, B. H. Smalley, Mrs. Cynthia Penniman, Miss Laura P. Smalley, the Misses Barlow, Mr. and Mrs. Noah Tyler, Dr. Greene, of Maine; Joseph Brigden, Frances Taylor, Lucius I. Barber, Judson W. Perkins, J. B. Smith, Miss Wilhelmina Jones, a daughter of the celebrated naval officer, John Paul Jones; Miss Virginia Scott, daughter of General Winfield Scott; Keating Lawson, Miss Eldridge, of Lansingburg, New York; Miss M. Annina Corrie, Madame Sarah Jones, of the Sacred Heart; Major Noble, Miss Edmonia Lewis, Mrs. James Elder, Mrs. John C. Seton, Mrs. Miriam Meredith, sister of William M. Meredith, of Philadelphia; Judge M. E. Manley, of North Carolina; Judge Tenney, son-in-law of Dr. Orestes A. Brownson; Judge Heath, of North Carolina; Judge Moore, of North Carolina; Judge Rice, of South Carolina; William B. Watts, Howard Haine Caldwell, Richard Alexander Caldwell, Dr. John Bellinger, of Charleston, South Carolina; Edmund Bellinger, Jr.; Miss Susan Bellinger, Misses Harriet and

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ton Baker, Rev. James M. J. Converse, Rev. Mr. Thornton, of Charleston; Rev. William Boddy, Rev. E. Gilliam, Rev. Herbert S. Blodgett, Rev. Mr. Zeller, Rev. Matthias Brown, Rev. Cyril Ross, Rev. Edward Q. L. Waldron, Rev. Thomas J. Johnson, Rev. John S. Siebold, Rev. Francis M. Craft, Rev. Mr. Adams, of Iowa; Rev. Egbert Cleave, Rev. George Allen, Rev. Henry Lemke, formerly a Lutheran minister, converted in 1823, a companion on the mission with Rev. Prince Gallitzin, a Benedictine monk; Rev. Homer Wheaton, Rev. Charles Griffin, Rev. I. A. Storke, Rev. John Keble Kaicher, Rev. J. C. Russell, Rev. Edward I. Taylor, Father Cuthbert of the Benedictine Order, Rev. Adolph Geyer, Rev. Dr. Williams, Rev. C. W. K. Morrell, Rev. Herman Wolf, Rev. Thomas S. Major, Rev. Mr. Witcher, Rev. C. A. Van Dormender, Rev. F. Stobinger, Rev. Henry L. Robinson, Rev. George G. Osborne, Rev. William P. Salt, Rev. I. P. Bodfish, Rev. Daniel Gans, Rev. August Freitag, Rev. William H. Dwyer, Rev. W. M. Meredith, Rev. Dr. W. B. Huson, Rev. George Washington Bowne, Rev. F. Wilson, O. P., Rev. A. Grainger, of Fort Wayne; Rev. Henry Livingston Richards, father of the Rev. J. Havens Richards, President of Georgetown College; William Richards, a brother of the last; Rev. Harmon Denny, S. J., Rev. A. M. Clark, Rev. Francis A. Baker, Rev. Pollard McC. Morgan, Rev. Edward Lee Green, Rev. F. Matthias, Rev. J. A. Phillips, Rev. Professor Wolff, Rev. Algernon S. Brown, Rev. Charles K. Jenkins, Rev. Mr. McCall, of Baltimore; Coolridge Shaw, died a novice of the Jesuits; Lieutenant Spear, Lieutenant Cwid, died a novice of the Jesuits; Lieutenant Dodge, Captain Placidus Ord, of the Army; Captain Nathaniel B. Shurtleff, Captain B. B. Griffin, Captain Gerdes, Major Henry S. Turner, Major Axel Dearborn, Major John O. Farrell, Major J. R. Nearnsie, Colonel George Kent Cooper, Colonel George P. Hooper, Colonel P. M. Holbrook, Colonel George P. Kane, of Baltimore; Colonel W. E. Clarke, Colonel G. W. T. Vault, Colonel Frye, of the Confederate Army; Colonel N. A. Tucker, Colonel Aldrich, Colonel John Basket, Colonel Coleman, Colonel Bradshaw, Colonel Caldwell, Colonel Lewis, Colonel James Madison Cutts, nephew of President Madison and father of Mrs. Stephen A. Douglass; Colonel L. M. Montgomery, General Abbott H. Brisbane, General Joseph Lane, General Northrop, General James Jones, General W. S. Harney, General T. J. McKaig, General A. W. Whipple, General James A. Hardie, General Samuel D. Sturgis, General Robert O. Tyler, son of President Tyler; General Hugh Judson Kilpatrick, General John G. Foster, Hon. Robert A. Bakewell, Judge of the Court of Appeals at St. Louis; Hon. John H. Mulkey, Judge of the Supreme Court of Illinois; Hon. Frank Hurd, Hon. W. E. Weld, of Illinois; Hon. B. R. Young, Hon.

Louis Dent, brother-in-law of General Grant ; Hon. John N. Washington, Hon. A. M. Keiley, Hon. Jonathan H. Price, Mrs. Emily W. Burnett, Mrs. Jane McKnight, Mrs. Frederick Chatard, Mrs. Day, a niece of Daniel Webster ; Mrs. Bland, wife of Hon. Mr. Bland, the author of the " Bland Silver Bill " ; Mrs. Don Piatt, Mrs. Manly Tello, Mrs. Mulkey, wife of Judge Mulkey of the Supreme Court of Illinois ; J. J. Hays, the Arctic explorer ; Walter Waylen, Samuel P. Tuckerman, George W. Lloyd, J. B. Walker, Henry F. Lamb, J. Audley Maxwell, Horatio Greenough, William Goddard, Dudley A. Hastings, Samuel J. Menard, Francis Fisk Heard, Reuben R. Springer, John B. Clay, son of Hon. Henry Clay ; John Dunning Whitney, D. M. Mitchell, Richard Storrs Willis, brother of Nathaniel P. Willis ; James A. Van Dyke, of Detroit, father-in-law of Major Henry F. Brownson, and father of Rev. Ernest Van Dyke ; John R. Benson, J. G. Mayer, James Blakeley, Frank Shoeldler, Mrs. Emily J. Bushby, Mrs. William B. Barclay, Mrs. Frances Allonby Sumner and her daughter, Mrs. Williams ; Mrs. Helen S. Bradford, Mrs. Mary Bradford, a sister of Mr. Jefferson Davis ; Mrs. Mary Brown, Mrs. Louis Hamersly, Mrs. Hathaway, Mrs. Elizabeth Fitzsimon, Mrs. Miles, mother of the author, George H. Miles ; Mrs. Elizabeth Thompson, of Portland, Oregon ; Mrs. Arnold, of Chelsea, Massachusetts ; Mrs. Henry Sprague, Mrs. Robert Williams, wife of General Robert A. Williams ; Mrs. Lewis C. Levin, widow of the Know Nothing leader in Philadelphia ; Mrs. Gubert, Mrs. Cummings, mother of Rev. Dr. Cummings, of New York ; Mrs. J. Fairfax McLaughlin, Mrs. Ferdinand E. White, Mrs. Mary Stobinger, Mrs. Mary A. Woodbury, Mrs. J. J. Greeves, Mrs. J. Watson Taylor, Mrs. Fanny S. Samples, Mrs. George Miles, Mrs. C. A. Van Dormenden, Mrs. Ann Rudolph, Mrs. George P. Hooper, Mrs. Sherwood Callaghan, Mrs. Alfred Bibby, Mrs. Mary Josephine Green, Mrs. Conrad, Mrs. Lewis Worthington, Mrs. George Worthington, Mrs. Maria Tucker, Mrs. Joseph Galibart, Mrs. Samuel Ward, Mrs. Thomas Dwight, Mrs. Nathan Matthews, Mrs. A. J. Croswell, Mrs. Frederick Flagg, Mrs. William Taylor, Mrs. Emily Farnum Dorsey, Mrs. Moses Farnum, Mrs. J. H. Stickney, Mrs. Henry Wyman, Mrs. F. M. Parker, Mrs. Jane King, Mrs. Clara M. Thompson, Mrs. Dr. Cooke and Dr. Cooke, of Chicago ; Mrs. Emma G. Salter, Mrs. Rebecca Stephens Salter, Mrs. R. M. Hodges, Mrs. Jane Wade, Mrs. Lydia Peak, Mrs. Charles F. McKenna, Mr. and Mrs. R. M. Johnston, Mrs. Anderson, Mr. and Mrs. Charles A. Ingraham, Mr. and Mrs. Julius A. Palmer, Mr. and Mrs. Theodore Metcalf, Dr. and Mrs. John Dean, Dr. and Mrs. Richard H. Salter, Mr. and Mrs. Charles R. Mainard, Mr. and Mrs. Henry L. Richards, Sr., Mr. and Mrs. W. T. Wilkinson, Mr. and Mrs. Charles

Clauson, Mr. and Mrs. Geiger, Mr. and Mrs. R. A. Mills, Mr. and Mrs. Joslin, Mr. and Mrs. George F. Emery, Mr. and Mrs. T. W. Hornsby, Mrs. Sophia Brewers, Mrs. Mary J. Simpson, Mrs. Mary Leonard, Mr. Leonard Ives, Mrs. Simmons, of Oregon; Mrs. Cynthia M. Thomas, Mrs. Lucy Gormly, Mrs. Mary Anderson, Mrs. Sara Sancier, Mrs. Edward C. Cody, Mrs. Hemmerly, Mrs. William H. Hunt, wife of the Secretary of the Navy, William H. Hunt, under President Garfield; Mrs. Mary Graham Cahill, Mrs. Sarah H. Kelly, Mrs. Walworth, of New York city, mother of Rev. Clarence Walworth; Mrs. Witzell, of New York; Mrs. E. P. Scammon, wife of General Scammon; Mrs. General John Newton, Mrs. General Phil. Kearney, Miss Helen Davis, sister of Admiral Davis; Miss Emma Carey, Miss Marion Longfellow, a relative of the poet Longfellow; Miss Charlotte Dana, Miss Mary Lewis, Miss Mary Stevens, Miss Lorillard-Spencer, Miss Henrietta Dana, Miss Florence Lyman, Miss Julia Metcalf, Miss Minnie S. Downey, Miss Susan Osborne, Miss Madalena Woodbridge, Miss Margaret Blaine, daughter of Hon. James G. Blaine; Miss Bertha Rutledge, Miss Anna Barnum, Miss Alida V. S. Harwood, Miss Virginia Cleveland, Miss Matilda Dana, Miss Addie Parks, Miss Annie M. Cary, Miss Emma Irwin, Miss Sarah Bowker, Miss C. E. Porée, Miss Emeline L. Stevens, Miss Jane Frances Ripley, Miss Susie Raynor, daughter of Hon. Kenneth Raynor, and niece of the Protestant Bishop Polk; Miss R. V. Roberts, Miss Agnes Lena Roy, Miss Fannie King, Miss Terry, of Charleston, South Carolina, who was received into the Church at Rome; Miss Dora Young, Miss Emma Swingle, Miss Emma Dixie Porter, Miss Sallie Loring, Miss Laura Davis, Miss Mollie Harkins, Miss Cora Anderson, Miss Annie Eback, Miss Sarah L. Hate, Miss Mary J. Salter, a daughter of Chaplain Salter of the United States Navy; Miss Helen J. Salter, of Boston, now a Sister of Mercy; Miss Leonora Salter, Miss Edith Agnes Salter, Miss Amelia Sanderson, Miss Annie Miles, Miss A. Cooper, Miss Annie Fisher, daughter of Judge Fisher, of Washington; Miss Christine Fisher, Miss Annie B. Fisher, Miss Susan McElheny, Miss Mary Myers, Miss Dora Lewis, Miss Mary Kittell, Miss Fannie Bradshaw, Miss Maud Muller, Miss Margaret Everett, Miss Hannah Prescott, Miss Ellen Dawson, Miss Julia Guernsey, Miss Rosecrans, daughter of General Rosecrans; Miss Ord, Miss Emma Wixon (Mlle. Nevada), the Misses Everett, nieces of Hon. Edward Everett; the Misses Kearney, daughters of General Phil. Kearney; the Misses Pierce, Miss Ann Hampton Brewster, Dr. Joshua Huntington, Horatio R. Storer, Dr. Hasket Derby, Dr. Johnson Elliot, Dr. Elgin T. McMurray, Addison Niles, Dr. W. H. Van Buren, a nephew of President Van Buren; Dr. John D. Bryant, Alvin G. Lank-

ford, Dr. Simon Pollock, Dr. James M. Youngblood, Commodore Francis M. Ramsey, United States Navy; Dr. Elisha H. Gregory, Dr. Moses L. Lenton, Dr. George A. Sterling, Dr. G. A. Coggeshall, Dr. Green, of East St. Louis; Dr. W. E. Horner, Dr. Nicholas F. Cooke, Dr. T. T. Cabamus, Dr. Henry T. Hewit, Dr. Charles H. Budd, Dr. Isaac B. Craft, Dr. Vance, of Cleveland, Ohio; Dr. Russ, of New Mexico; Dr. Bigelow, of Detroit; Dr. William Faulkner Brown, John C. H. Dieman, Mus. Doc.; Captain Ward, of the United States Navy; Captain Kelly, Commodore Guest, Rear-Admiral Andrew Allen Harwood, Rear-Admiral John C. Beaumont, Warren K. Southwick, Thomas Southerland, Hannibal Green, Hugh B. Stoughton, Franklin H. Churchill, John White, of New York; William H. Guion, Edward Everett, of Chatham, New York; William J. Phillips, Theodore Blume, Charles H. Knight, Nelson Wood, Sylvester J. Megargee, J. M. Wilcox, Samuel Kilpatrick, James N. Morris, H. W. J. Garland, George Woodward, George M. Dexter, Julius Clarence Estes, Michael Perry Estes, James M. Rand, John Breckenridge McKay, Henry Green, Charles Ellis Ruching, Henry M. Dixon, William Fisher, William Shrieve, Mr. Brawnfield, Isaac B. Lovejoy, Lawrence Lottier, William C. Taylor, John B. Tabb, Charles Austin, George Anderson, George Boyle, Ignatius Harkins, Andrew Foskett, Jackson Davis, Julian Metcalf, Henry Parks, E. T. Turner, Stephen F. Hogg, M. Hunt, of Weymouth, Mass.; Robert Whetmore, Gustav L. Brann, Albert Myers, R. Bacon, William E. Jones, Alfred Anderson, George C. Leach, George A. Leach, C. M. Ward, John W. Twombly, Henry Blake, H. D. Fitzgerald, Henry Adams Thayer, Alfred Peterson, Lewis Mills, George B. Keen, Chandler Berrian, Thomas Chase, Colonel D. S. Lamson, Judge and Mrs. Arrington, of Chicago; Thomas Chase, Arthur Marsh Clark, J. M. Gould, Messrs. Scott, Carlisle and Woodworth, students at Annandale, New York; Mr. Elbert, of Detroit; Mr. Chapin, of Springfield, Massachusetts; Henry Rosecrans, Mrs. Margaret Bleeker Harwood, Madame Gaston de Fontevilliant, a sister of Mrs. William K. Vanderbilt; Edward De V. Morrel, Professor John S. Ermenstrout, Rev. John S. Sumner, a Jesuit priest; Rev. F. A. Spencer, who became provincial of the Dominicans; Rev. Edward Dwight Lyman, Rev. W. J. Simmons, a Paulist priest; Mrs. Joseph Drexel, Mrs. Hicks Lord, Mrs. John J. Coppinger, daughter of Hon. James G. Blaine; Mrs. Thomas Francis Meagher, Mrs. Elias Higgins, Miss Ella B. Edes, Miss Frances C. Fisher (Christian Reid), Miss Mary Agnes Tinker, George V. Hecker and Mrs. Hecker, Paul Revere, grandson of the celebrated Paul Revere, of Boston, who gave the midnight alarm to the patriots of the Revolution; Rev. Edward Welsh, of the Society of Jesus; Mr. Eben Faxon, Thomas E.

Waggaman, great-nephew of President Tyler; Mrs. Thomas J. Semmes, of New Orleans; Mrs. B. J. Semmes, of Memphis; Col. Rice W. Payne, Dr. and Mrs. Chilton, of Virginia; Mrs. Georgianna d'Arbranches, Mrs. W. Hildreth Field, Mr. George W. Riggs, the banker of Washington, Miss Anna Smith, daughter of Commodore Smith of the American Navy, Hon. Truman Smith and his daughter, Mrs. Whelan, of Philadelphia, Miss Georgianna Campbell, Miss Mary Pannel, Rev. Francis Barnum, S.J., now engaged in the Alaskan missions; Dr. Peterson and Gen. Russell Thayer, of Philadelphia.

This lengthened list contains many names distinguished in the annals of our country, in the civil, military, naval, diplomatic, scientific, and literary service. We could give many details of an interesting personal, biographical, and historical character in regard to a great number of these eminent converts if time and space permitted. Indeed, the material is or could be made sufficient for a book of thrilling interest. But why write a Catholic book in America? Its publication is one thing, but to be reimbursed for its cost of publication is quite another. Where omissions occur the writer will thankfully receive additional data.

That remarkable and suggestive phase of our theme—the fact that our converts have come to us chiefly from Christian sects, and not from infidel schools of religious thought and study—shows what power there is in the very name of Christian, and still more how strong is the power of those Christian tenets which are openly and fully professed by the sects; and even yet how infinitely more potent is the grace of God. But even here we must not forget the Indians, who have even craved the faith; for, as Cardinal Manning has so forcibly and so benignantly expressed it “The work of the Holy Ghost, even in the order of nature, so to say—that is, outside of the Church of God and of the revealed knowledge of Jesus Christ among the heathens—that working is universal in the soul of every human being.” How many of us Catholics, who have received the gift of the faith through Catholic ancestors, had the case been reversed and had we been born and educated in the sects and in the errors of the sectaries—how many, I say, of us could feel assured that we would have been among the 700,000 Catholics now forming the convert element in the American Church? How many of us would, by our superior zeal, our greater learning, our co-operation with special graces, now be members of the religious orders, priests officiating at the altar, spouses of Christ, eminent laymen, authors and scientists, benefactors of religion, and even members of the American Catholic hierarchy, as the seven hundred eminent Catholics have been, or as those we have named above? How remarkable are the cases of those who, when they

saw the truth, were able to rise above the errors of education, and had the heroic courage, often under appalling difficulties, to embrace the faith! Such, indeed, has been the fortitude of our converts. And even more than this, they have embraced every suffering of mind and body, made every sacrifice of wealth, family, friends, country, and social position; silenced every voice of sentiment, affection, and society, and hearkened to the voice of conscience and the teachings of truth. It is at this juncture, and at this part of our subject, that the Church and her divine mission, as the depository, the witness and the teacher of truth, vindicates her apostolic character, and, with loving and gentle offices, receives, as a devoted mother, the children whom she loved but had never embraced. It is by a recognition of the Church, in her divine mission of truth and love, that converts feel their faith anchored to the rock of eternal truth. It will prove interesting to trace this fact—the open and clear recognition of the Church—in the conversions of some of our most eminent converts, whose cases we will notice singularly and more particularly. Henceforth the subject will be treated more historically. For, although St. Paul says that even the heathens, by the light of nature, may come to the knowledge of God, and are culpable if they do not;¹ “For the same is Lord over all, rich to all that call upon Him”;² yet, it is the Church which proves to be the constituted channel of supernatural light for the conversion of sectarians, who had honestly thought they saw the Church in other communions.

In Maryland, from the very foundation of the colony, in 1634, the zealous Jesuit fathers, while evangelizing the Indians, labored most earnestly for the conversion of the Protestants who came out from England with the Catholic gentry, and so successful were their apostolic labors that a great part of the Protestants in the colony became Catholics. The Church was represented then and there by the Jesuits, the children of Loyola, types of the priesthood of the Church.

An interesting conversion, three-quarters of a century later, was that of Col. Lionel Brittin and one of his sons, in 1707, in Philadelphia. It is true we have some knowledge of the presence of Catholics in Philadelphia as early as 1686. The general impression has been that the Jesuits from Maryland did not commence their visits to Philadelphia as early as this, and Dr. John Gilmary Shea, under this impression, attributes the conversion of Col. Brittin to the Franciscans, who had been sent over to Maryland some years before. Mr. Martin I. J. Griffin has found a will, in the Philadelphia records, of one Peter Debuc, who died in 1693, and who bequeathed

¹ Rom., i., 20.

² Rom., x., 12.

£50 to one Father Smith, which he supposed was an *alias* of one of the Maryland Jesuits—Father Henry Harrison or Father Thomas Harvey. It is true that Father Steynmeyer many years later went to Pennsylvania and New York under the *alias* of Father Ferdinand Farmer; but it is difficult to explain why a disguise should have been assumed by Catholic priests in Pennsylvania, in 1686, since in 1664, nearly a quarter of a century before the conversion of Lionel Brittin, William Penn had declared: “And in order that each may enjoy that liberty of conscience, which is a natural right belonging to all men, and which is so conformable to the genius and character of peaceable people and friends of repose, it is established firmly, not only that no one be forced to assist in any public exercise of religion, but also full power is given to each to make freely the public exercise of his own, without meeting with any trouble or interference of any kind, provided that he professes to believe in one eternal God, all-powerful, who is the Creator, Preserver, and Governor of the world, and that he fulfill all the duties of civil society, which he is bound to perform towards his fellow-citizens.” However, the little flock of five or six Catholics must have assembled at Christmas or at New Year’s, 1707–8, in Philadelphia, to witness the reception of Col. Lionel Brittin and his son into the Church, and Mass must have been celebrated for them, most probably by one of the Jesuits of Maryland. The necessity for a long and previous preparation and instruction of the father and son in the tenets of the Catholic faith, may well suggest the occasional visits of Catholic priests to Philadelphia at that early period. In 1732, only a quarter of a century later, St. Joseph’s chapel was built, when the little Catholic flock of Philadelphia was estimated at forty members. But Lionel Brittin and his son must probably have had the consolation of attending Mass about or at the time of their reception into the Church, for it was very soon afterwards, January 8th, 1708, that Rev. John Talbot, afterwards the first Episcopal bishop, wrote to the secretary of the London Society for the propagation of the gospel—“Arise, O, Lord Jesus Christ, and help us, and deliver us for Thine honor! . . . There’s an Independency at Elizabethtown, Anabaptism at Burlington, and the Popish Mass in Philadelphia.” How rejoiced must those early pioneers of the faith have been at attending the Holy Sacrifice, and seeing the increase in the flock! And yet how differently the Rev. Mr. Talbot viewed that prophetic scene! Col. Lionel Brittin was a man of wealth and position; he was the church warden of the Protestant Church. It is quite certain that a number attended the Mass, and such, too, was the commotion which so important a conversion produced, that we find it again mentioned in Hill’s “History of Burlington,” giving the same or another letter from Mr. Talbot,

the future Protestant bishop; "I saw Mr. Bradford at New York; he tells me Mass is set up and read publicly in Philadelphia, and *several people* are turned to it, amongst which Lionel Brittain (Brittin), the church warden, is one and his son another." It may be that there were other converts, for Mr. Talbot says *several were turned* to the Mass, and amongst them Colonel Brittin and his son. But, in this earliest of American conversions, where the name is known, we find the Church organized and at her mission—the pillar and the ground of truth! the rock of ages! the Spouse of Christ! represented by the priest, the Mass, the Crucifix, the altar, the Holy Eucharist! Thus, in Pennsylvania, under the mild and gentle administration of William Penn, a Quaker, Mass was allowed by law to be celebrated, and the attendance of Lionel Brittin and his son, the new converts, and the few other Catholics of the city at Mass, elicited only a complaint from Bishop Talbot to the London authorities. In neighboring Maryland, however, founded by Catholics on the basis of religious liberty, and made the "land of the sanctuary" for all who suffered for conscience's sake, at that very same period, the public celebration of Mass was prohibited in Catholic Maryland from and after the Protestant ascendancy under William and Mary, in 1688, and could only be privately performed in the mansions of the wealthy gentry, or in private chapels erected on their estates, such, for instance, was Carroll Chapel, on Carroll Manor; Barry's Chapel, on the site of the City of Washington, Boone's Chapel, on the estate of Henry Boone, the maternal great-grandfather of the present writer, and many other chapels forming a part of the build-ings of the message or manor.

The next conversion of eminence was that of Rev. John Thayer, Congregational minister, of Boston; and though it stands in contrast with that of the eminent layman, Lionel Brittin, of Philadelphia, it was identical in this, that they were both accomplished through a recognition of the Church as the pillar of truth. John Thayer was a member of one of the oldest and most wide-spread families of New England. Averse at first to study, his education commenced, in fact, when he was sixteen, and under Rev. Dr. Chauncey he studied well, entered the Protestant ministry, and was two years chaplain at Castle William, when feeling an inclination for foreign travel, he went to Europe in 1781, and after travelling through England and France, he reached Rome about the beginning of 1783. While visiting the galleries, ruins, and basilicas of the Eternal City, an event happened which filled the city with religious awe: a Saint had just died at Rome. It was St. Benedict Labre, the mendicant, the real type of voluntary poverty; one who, in our country and times had he approached the gate of a private residence, all unkempt and ragged, a pilgrim of prayer though he

were, would have been driven away as a tramp. But in Rome there was an odor of sanctity that pervaded the atmosphere at his death and soon the rumor was bruited around that God had shown favor to his faith and his self-denial by the working of miracles. Though Mr. Thayer had read some of the grounds upon which Catholic tenets rested, he loathed the thought of miracles and the invocation of the Saints. The talk of the city was now about the miracles of St. Benedict Labre wherever he went; and he, with many other Protestants then in Rome, denied and ridiculed the supposed miracles. This was a perilous position for a young Protestant, a minister from Boston to take, for a Roman gentleman challenged him to an investigation of some of the miracles of the deceased pilgrim-mendicant. Mr. Thayer was an earnest man—he had never founded or started heresy, as Luther had, nor was he pertinacious in adhering to it, for he knew no religion but the one he had received from his parents—he consented to go and investigate. To his astonishment he found the facts unquestionable; the miracles were proven, as he stated on his return, by testimony which would have been received in any American court of justice as proof of any fact. He at once saw that God was pointing out the Catholic Church as the depository of revealed truth—how could her teachings be false, or her mission other than authentic, when she possessed the gift of miracles, the very means by which our Saviour, on earth, had proved his mission? John Thayer was received into the Catholic Church on May 25, 1783. He had several audiences with the Holy Father, who bestowed upon him a crucifix he ever afterwards preserved and revered. The tradition that he went to Rome to convert the Pope has no foundation. He returned to France, where he entered the College of Navarre, was received into an institution for recent converts, and became a student of the Seminary of St. Sulpice. He himself, also, afterwards became a pilgrim, and visited on foot the Monastery of La Trappe, and the home of St. Benedict Labre at Amette. He completed his studies at St. Sulpice, and was ordained as a Catholic priest by the Archbishop of Paris about the year 1786. He dedicated himself to the missions of his native country. While awaiting orders from Bishop Carroll, he became a missionary in Paris and London, especially among the English and Irish in Paris. He converted many Protestants. He arrived in Boston in 1790. He was fired with an extraordinary and apostolic zeal to labor for the conversion of his countrymen, and especially of his late associates in error. He ministered to the little flock of Catholics in Boston, and while zealously attending to parochial duties, he publicly announced his purpose of preaching in the neighboring towns, and his readiness to answer all objections against Catholic doctrines. He soon had

his hands full of controversy, and met many antagonists; amongst whom was Rev. George Lesslie, who vauntingly announced that, "As the gauntlet is thrown down by Mr. Thayer, it is taken up by George Lesslie." Mr. Thayer had issued no challenge, but he was ever ready for the encounter, and he was acknowledged as the victor. No sooner had Father Thayer silenced Mr. Lesslie, than he was violently assailed by an eminent lawyer named John Gardner, and by many anonymous writers. His zeal was unbounded. His weekly conferences were largely attended by the leading people of Boston, and he made a number of converts. He served as missionary in several places, including Kentucky, where he was a zealous missionary from 1799 to 1803. His zeal and manner became almost intemperate, so much so as to offend the cooler temperament and better judgment of Bishop Carroll. Their differences led to Father Thayer's retirement from America to Ireland, where, as an humble and poor missionary, he devoted the remainder of his life to the relief and welfare of the poorest part of the inhabitants of Limerick. Here he died, amid the benedictions of the poor whom he had so zealously served, and by whom his name is revered to this day. He left behind him written memorials of his faith and mission, which will be alluded to again. While in Europe, he raised a considerable fund for the introduction of the Ursuline Nuns into Boston, and the establishment of the first New England Young Ladies' Catholic School, which, in the hands of bishops Cheverus and Fenwick, led to the founding of the Ursuline Convent and School of Mt. Benedict, at Charlestown, which, on the night of August 11, 1834, was ruthlessly destroyed by an incendiary fire applied by an infuriated mob of fanatics.

The scene of eminent conversions is now shifted from Boston to Maryland; from the land of the Roundheads and Puritans to the land of the Cavaliers and Catholics. Of the ancient and distinguished family of the Lees, eminent in English as well as in American annals, was Thomas Sim Lee, one of the revolutionary fathers of the Republic; now, away from fields of religious controversy, and amid the gentle influences of a Catholic home, sanctified and enlightened by the good example and virtues of a devout Catholic wife, an American recognizes the true Church in the sanctity of its members, and joins the one fold of Christ. Governor Thomas Sim Lee's ancestors, the Lees of England, were of Norman descent, and were amongst the companions of William the Conqueror. Lionel Lee, in 1192, had served with other English Cavaliers in the Crusades under Richard Cœur de Lion. The pioneer of the Lees in America was Richard Lee, whose sons founded the Lee family of Virginia, with the exception of Philip, who went over to Maryland, and was the founder of the Maryland

Lees. Among the Virginia Lees, some of the illustrious men were Richard Henry Lee, statesman; Francis Lightfoot Lee, a signer of the Declaration of Independence; Henry Lee, known in Washington's army as Light-Horse Harry; Robert E. Lee, commanding the Confederate forces in 1861-64. Among the Maryland Lees, the most distinguished member was Thomas Sim Lee, who, after holding several local offices, was Governor of Maryland from 1779 to 1783, a delegate to the Continental Congress in 1783-4, and a member of the Maryland Constitutional Convention in 1786. In 1794, he was elected United States Senator from Maryland, but declined to serve. Governor Lee was born in Frederick County, Maryland, in 1744; on October 27th, 1771, he married Mary Diggs, the only child of Ignatius Diggs, of Melwood Park, Maryland, a family as distinguished among the old Catholic families of England and of Maryland as the Lees were among the Protestant families of England and Virginia. Mr. and Mrs. Lee warmly espoused the cause of American Independence, and thereby lost the sympathy and received the rebukes of their relatives on the Lee side in Maryland, who were royalists. Mrs. Lee headed the ladies of Maryland in their exertions for the relief of the sufferings of General Washington's soldiers in the Revolution, and received a letter of thanks from the General in 1780. Mrs. Lee was at once a devoted patriot and an ardent member of the Catholic Church. The Catholics of Maryland sided with the cause of liberty and independence. Her pious example deeply impressed her noble husband, and on one occasion he made a vow to her when she was dangerously ill, that he would join the Catholic Church, the Church of her fathers and his, the Church which had fired the hearts of his ancestors and hers to join the Crusades for the rescue of the tomb of the Saviour. He kept his promise, and became a Catholic about the year 1800. Among the family treasures of the Catholic Lees was found a copy of Thomas à Kempis, which was presented to Mrs. Lee by that other eminent convert, Prince Gallitzin, the missionary of the Alleghenies, and who had assumed the humble name of Father Smith. Governor Lee wrote in the book the following inscription: "The gift of the Rev. Mr. Smith to Mary Lee, 1788, passed by the ever-to-be-lamented death of my beloved wife to me, her inconsolable husband, Thomas S. Lee." Governor Lee afterward built a memorial church in Frederick County, Maryland, on his estate, Needwood Forest, which was called St. Mary's, in honor of the celestial patroness of Mary Lee. Several children of Governor Lee intermarried with descendants of Charles Carroll, of Carrollton, and their descendants have remained true to the faith of their Catholic ancestors.

Following a Pennsylvania Protestant, a New England Puritan,

and a Maryland cavalier, in the line of conversions to the Catholic faith, we will now briefly relate the case of a Russian nobleman, Prince Demetrius Augustine Gallitzin. Born of noble parents, his father was a member of the Greek Church and Russian ambassador to Holland; his mother, a daughter of General Von Schmettau, of Austria. Both had been admirers of Voltaire during the youth of Demetrius, who had received no religious training. In 1786 the princess, his mother, became a Catholic, and was now most solicitous for the faith of her son, who was destined for the army. Accustomed to hear the Catholic side from his mother, and from his father and his visitors the reasonings of non-Catholics, infidels, unbelievers, reformers, Greeks, Protestants, theorists of every school, young Gallitzin, at the age of maturity, about 1787, to the joy of his admirable mother and in answer to her prayers, became a member of the Catholic Church. His father expected that his associations with officers of the Russian Imperial Guard would correct all this. Demetrius received a commission in the Austrian army, as aide-de-camp, in the first campaign against France, in 1792. In the midst of European disturbances an imperial order excluded foreigners from the Austrian army, and it was decided that Demetrius should make a trip to the young American republic. A young, learned, and pious priest, Rev. Felix X. Brosius, was chosen for his companion. They sailed from Rotterdam on August 18, 1792, and on the voyage he assumed the name of Augustine Schmettau, or, as it was rendered in America, Schmett or Smith. In this voyage, so pregnant with future results, Father Brosius and young Gallitzin seemed to repeat the ancient Scriptural story of the archangel and young Tobias—the priest and the prince, the Raphael and Tobias. His vocation was developed and confirmed on the voyage; he arrived at Baltimore on October 28th, entered the Sulpitian Seminary, and, in spite of the remonstrances of both his parents, at the loss of a commission in the Russian army and the forfeiture of his inheritance, he accepted ordination at the hands of Bishop Carroll, on March 18, 1795. He was the second priest ordained in the United States. After several temporary missions, Father Gallitzin was sent, in 1799, to Maguire's Settlement, in Pennsylvania, where there were only a dozen Catholic families. Here he undertook the founding of a Catholic colony, purchased twenty thousand acres of land, built a log church in 1800, erected the town of Loretto in 1808, in the heart of the Alleghenies and of his apostolic mission. His work resulted in the establishment of Cambria County, with Loretto as its capital. On the death of his father, in 1803, he again refused his mother's request to return to Europe to litigate for his inheritance with his relatives, and in 1808 the Emperor of Russia de-

cided that he had forfeited his inheritance by becoming a Catholic. His great undertaking involved him in pecuniary embarrassments, but large remittances, first from his mother and then from his sister, enabled him to pay his great obligations; he expended \$150,000 on his cherished mission. His colony proved a success; mission after mission arose, and Ebensburg, Carrollton, St. Augustine, Witmore, Summitville, and several thriving Catholic missions flourished in what the apostle of the Alleghenies found one of the wildest of American wildernesses. His little log church of 1800 was then the only Catholic church between Lancaster, Pa., and St. Louis, Mo. Unable to get an assistant, Father Gallitzin attended all these missions himself. His labors were incessant; day and night, winter and summer, he visited his flocks, and knew every Catholic family. He also made a number of conversions. Neither excessive heats, nor paralyzing cold, nor storms, nor snows, nor frozen rivers, nor destructive floods impeded his apostolic labors. His name became famous in the land. Twice he refused the mitre, preferring labor, thirst, hunger, and sufferings to the honors of the purple. He was a rigid disciplinarian, but the few harmless eccentricities he manifested marked rather the strength of his zeal without marring the symmetry of a noble character. His severities were united with untiring charities and tenderness of heart. Of him it was said that, "If he had possessed a heart of gold he would have given it to the unfortunate." But he gave the poor a heart more precious than gold—a heart of grace, and love, and charity. For nearly half a century he labored for the best and highest good of his fellow-men. He died on May 6, 1840, universally honored, lamented, and venerated.

How different are the outward or apparent causes leading to conversions to the Faith. Shifting our researches now to Virginia, we will relate a conversion different as possible from the preceding cases, mysterious yet benign, and one which, however, has this in common with them, that the great mission of the Church was recognized as the teacher of truth and channel of grace. Were the facts not vouched for on unquestionable evidence, they would be incredible. But there is also a significant lesson in this instance, a warning that no one, in the case of a dying human being, should deny the services of a minister of religion to any one asking for them *in extremis*, whatever may be the relations of the survivors to the departing one. About the year 1790 a well-to-do and intelligent farmer, Adam Livingston, moved with his entire family from Pennsylvania, and settled near Middleway, in Jefferson County, Va. He belonged to the old Dutch stock of Pennsylvania, and was a Lutheran in faith. In Virginia, by dint of industry, honesty, and thrift, he acquired a valuable estate, and he and

all his family were worthy people, being honest, kind, hospitable, and moral. It happened that on one occasion a poor Irish Catholic was taken ill near Mr. Livingston's house, while travelling through the country, and was most generously taken into his residence, and there received from him and all his family the most tender care and nursing; yet, after all, he died in their arms, and was reverently buried. But there was one request made by the dying man which not one of the Livingstons would grant. He asked, just before his death, that a Catholic priest should be sent for. Possessing, as they did, every natural virtue, this Lutheran family had been educated in the belief that Catholic priests were monsters, the emissaries of Satan; that they had horns on their forehead, like their master, and would bring disaster on a Christian household. From their standpoint they thought they were doing a charity to the poor man, dying in their home, by refusing his request, for the Livingstons were never known to do an unkind or an unjust act. Still, their refusal was against natural justice. But, strange to relate, Mr. Livingston, so far from escaping the machinations of the devil by refusing to send for a priest for the dying Catholic, soon afterwards began to experience the most distressing persecutions from countless devils. By some unknown means his barns and granaries were burned to the ground, his horses and cattle died, the family's clothing and beds were burned, or were, by some invisible hand, cut into shreds or into little strips in the shape of crescents. Even the boots, shoes, saddles, harness, were burned or cut into pieces; the burning logs of wood rolled from the fireplace across the floor of their own motion; noises the most appalling resounded in their ears; their furniture and crockery held high carnival in dancing, jumping, and crashing together and breaking to pieces. Sleep became impossible, the food was dashed away from their mouths at table, and every torture was inflicted upon them. The whole family were reduced to the stage of extreme nervous and physical illness; the neighborhood was horrified, and no amount of sympathy could relieve their sufferings. Mr. Livingston sent for ministers of different Christian sects, and, failing of relief, he even sent for conjurors; but their presence only provoked greater outrages from the satanic powers in possession, and the ministers were driven by invisible furies from the house. Visitors from near and far went, from sympathy or curiosity, to visit the Livingston house, and all returned with their clothing clipped to pieces. When a very small boy, at Washington, which was not far from the scene of these wonders, the present writer and his parents had friends and visitors frequently in their house who had visited the Livingston house, and who related their confirmatory experiences and observations.

Father Gallitzin related that an old Presbyterian lady went with others to see, and, before entering the house, she carefully took her new silk cap from her head, and folded it in her silk handkerchief, and carefully put it in her pocket, determined, at least, to save that; but when she came out of the house and took out her silk cap to replace it on her head, she found it cut into little crescents. I have heard my mother relate that an Indian, wrapped in his blanket, sat for a moment on the door-sill, and, when he arose, his blanket fell in shreds at his feet. Finally, Mr. Livingston, who had never seen a Catholic priest, saw in a dream a beautiful church, and, on entering it, saw a venerable man dressed in vestments, such as he had never seen, and he heard a voice saying: "This is the man who will bring you relief." After relating his dream to his family and many of his neighbors he finally met a person who, to his amazement, informed him that the dress he saw in his dream was such as was worn by Catholic priests in church. The exhortations of his family and neighbors to send for a Catholic priest were strenuously resisted by him. Finally, finding his miseries increase, he yielded, and travelled some distance to the nearest church, and on the following Sunday attended Mass. As soon as the priest appeared in the sanctuary robed for the service, he exclaimed aloud, in the hearing of the congregation, "This is the man I saw in my dream!" After Mass, accompanied by Mr. Richard McSherry and Mr. Minghini, members of the congregation, he besought Father Cahill, with tears, to go to his house; and after much entreaty the incredulous priest reluctantly went with him to the infested house. As soon as Father Cahill entered the Livingston house, he saw and heard the proofs of Livingston's story, which he had disbelieved, and he immediately sprinkled the house with holy water, knowing Satan's dislike for it; whereupon the disturbance ceased for a time, and as he left the house a purse of money long missing was mysteriously laid at his feet for the family. In the summer of 1797, Father Gallitzin was relieved of his laborious mission that he might visit the Livingston house, and he went there perfectly incredulous. He remained from September until Christmas, making a thorough investigation; and he too recorded his conviction of the reality of these diabolical proceedings. The troubles of the Livingstons having commenced again, Father Gallitzin determined to resort to the exorcism of the Church, but such were the noises he heard, as of rolling wagons, that he could not be heard; and he was overcome with nervous exhaustion from the struggle. But, when he called in the stronger man, Father Cahill, the religious exercises were resumed by the two priests, and Mass was said in the house. Now in obedience to the voice of the Church, the demons departed, the Livingstons had no more

trouble, and in their stead a sweet and gentle voice was heard to instruct and console them, and it remained with them for many years. Father Gallitzin also received from a gentle and unknown voice a remarkable and prophetic account of his future life, which he lived to verify. The Livingstons received a visit from an unknown youth, who fully instructed them in the Catholic religion, and who said: "I come from my father and I go to my father." Bishop Carroll, Father Gallitzin, Father Cahill, Father Brosius, Father Pellentz and other clergymen, visited and examined Mr. Livingston, and were convinced that he had been instructed supernaturally in Catholic dogmas. It is needless to say that Mr. Livingston and all his family became devout members of the Church. The Rev. William McSherry, S. J., who was president of Georgetown College from 1837 to 1840, repeatedly related the above facts, as he had received them from his father, Richard McSherry, who was an eye-witness of them.

[Its length here cuts our article short; but accounts of other eminent converts, and a statement of their writings, will be given in our next number.]

RICHARD H. CLARKE.

THE AGE OF THE HUMAN RACE ACCORDING TO MODERN SCIENCE AND BIBLICAL CHRONOLOGY.

PART II.

THE ANTIQUITY OF MAN ACCORDING TO GEOLOGY AND CLIMATOLOGY.

THE ancient peoples of the Orient, as we saw in our last article, were one in asserting for themselves a venerable antiquity. Not content with tens of thousands, many of them demanded hundreds of thousands of years as the period of time covered by their annals. They were likewise a unit in claiming descent from gods and demigods and in attributing godhead to all of their earlier rulers. Many, if not all of them, were firm believers in a golden age, an age of justice and happiness, which distinguished the first era of the world's history from all subsequent periods, and placed the beginnings of humanity on a much higher plane than our race has since been able to attain. "Then," says Hesiod, in his "Works and Days," "without chagrin or disquiet, exempt from labor and sorrow, men lived like gods. Infirmary, the companion of old age, was unknown. Enjoying, even in advanced years, the pleasures of youth, death to them was but as a sweet sleep. A fruitful earth furnished spontaneously the most delicious fruits, and the abundance thereof removed all occasion of envy. The peaceful and voluntary occupation which they found in providing for their daily needs removed the tedium of leisure and the weariness entailed by idleness."¹

The golden age, in which we may see a faint recollection of the Garden of Eden, was followed, in the order given, by the ages of silver, brass, bronze, and iron. The last was the worst of all, and was marked by sorrow and suffering and misery, ills which in the earlier ages, were unknown.

Modern science also, especially geology and prehistoric archæology, makes great demands on time, as well as on our faith, in its teachings regarding the age of the human species. But in marked contrast with the tenets of the ancients concerning the origin and primitive condition of mankind are the views entertained on the same subjects by the majority of our modern scientists and "advanced thinkers." Instead of ages of gold, silver, brass, bronze,

¹ Cf. Ovid's *Metamorphoses*, lib. i.

and iron which were supposed to characterize in the order named, the beginnings of humanity, prehistoric archæology tells us we must substitute ages of stone, brônze, and iron. According to the sages of antiquity,—and they gave but a dim reflection of the Biblical teachings on the subject,—the earliest inhabitants of the earth were a more perfect race of men than the world has since known. But they fell from their high estate, and degenerated into degraded sons of once noble sires. Modern scientists hold an opposite view. The history of humanity, they tell us, is not one of degeneration, but of development; not one of descent from a higher plane, but of ascent from a lower; not one that makes mankind of noble lineage, as we have long been wont to believe, but one that declares the species to have had a far humbler and a more ignoble beginning. We are not of

“Adam the goodliest man of men since born his sons,”

but the descendants of some speechless pithecanthrope,—*alalus*, Haeckel calls it,—or some tailless, narrow-nosed ape, that lived and disappeared untold æons before the advent of the traditional ancestor of our race.

If we are to credit geologists and archæologists, the time which has elapsed since the appearance of the first man on earth is a very variable quantity, for no two persons have yet been able to agree upon the precise number of years to be assigned as the age of the species.

Le Conte, in concluding his discussion of the antiquity of the human race, says: “We have, as yet, no certain knowledge of man’s time on earth. It may be 100,000 years, or it may be only 10,000 years, but more probably the former than the latter.”¹ M. Mortillet, one of the founders and chief representatives of the new science of prehistoric archæology, is more positive in his statements. “Man,” he says, “appeared in Europe at the commencement of the Quaternary age, at least 230,000 or 240,000 years ago.”² These figures are nearly the same as those given by Lyell and Lubbock, who estimated the age of the human race to be about a quarter of a million years.

Büchner, although less definite, is not less positive about the great antiquity of man. He regards it as perfectly certain “that the known historical period is a mere nothing, in point of time, when compared with the periods during which our race has actually inhabited the earth.”³ According to A. Laugel, whom Büchner quotes with approval, modern science has thrown back “the origin

¹ *Elements of Geology*, p. 570.

² *Le Préhistorique*, p. 628.

³ *Man in the Past, Present and Future*, p. 43. English Translation.

of man to a period so distant that, in comparison with it, our written history appears like a passing moment in a series of centuries, which the mind is unable to grasp."

But it was reserved for the notorious professor of Jena, Ernst Haeckel, to settle for once and for all any doubts that the Darwinian school of science might still entertain regarding the antiquity and origin of the human race. In his "History of Creation," after referring to the researches of some of his compeers, he declares that "The numerous and interesting discoveries presented to us by these extensive investigators of late years on the primeval history of the human race, place the important fact, long since probable for many other reasons, beyond a doubt that the human race, as such, has existed for more than twenty thousand years. But it is also probable that more than a hundred thousand years, perhaps many hundred thousand years, have elapsed since its first appearance."¹

The professor, however, is not satisfied with this simple but vague statement. As if guilty of some great blunder in under-rating the antiquity of man, he hastens to correct himself. He remembers that he is the hierophant of Monism, and that according to the theory of Evolution of which he has always been an ardent champion, there never was, properly speaking, a first man. The countless transformations, extending through long geological eras, which resulted in giving to one or several animals, whose environment was specially favorable, the distinguishing characteristics of the human species, were so insensible that it is impossible not only to fix the date of the apparition of man, but also equally impossible to predicate of any given individual that it was the first representative of humanity in its last stage of development. He therefore tells us, unambiguously, that the evolution of our race from the lower forms of animal life "took place so slowly that we can in no wise speak of the first man."

"Now," he continues, "whether we reckon the period during which the human race, as such, has existed and diffused itself over the earth, as twenty thousand, a hundred thousand, or many hundred thousands of years, the lapse of time is in any case immensely small in comparison with the inconceivable length of time which was requisite for the gradual development of the long chain of human ancestors."

And the professor is good enough not to leave his readers in ignorance regarding the genealogy of man, and the processes which obtained in his development from the lower forms of animal life. All is clear to him, and he is desirous of giving others the benefit

¹ Vol. ii., p. 298.

of at least the reflected light of his brilliant intellect. He exhibits a genealogical tree of twenty-two parent-forms which, he assures us, "may be regarded, with more or less certainty, as the animal ancestors of the human race, and which must be looked upon as, in a sense, the most important stages of evolution in the long evolutionary series from the one-celled organisms up to Man."¹ But he would not have us infer that the twenty-two types he gives us afford the complete pedigree of the human species. Far from it. He is very explicit in stating that, "the number of species, or, more accurately, form-stages, which are distinguished as 'species,' must, in the human ancestral line, in the course of many millions of years, have amounted to many thousands; the number of *genera* to many hundreds."

The original ancestor of our species, according to Haeckel's teaching, was a simple moneron, a small particle of structureless protoplasm, a creature of primitive slime or plasson. This moneron, which actually stands "on the very boundary between organic and inorganic natural bodies," Haeckel is frank enough to tell us, is like that "most remarkable of all monera," the *Bathybius Haeckelii*, discovered and described by Huxley, in 1868, and named after his friend, the professor of Jena, and the fantastical author of "*Natürliche Schöpfungsgeschichte*." To this last statement we give our cordial assent, especially in view of the fact of its ignominious fate at the hands of the eminent Catholic geologist, M. de Lapparent,² who showed that its reputed existence was a myth; and in view of the further fact, that the inventor of this missing link between the inorganic and organic worlds was obliged, in the presence of the British Association for the Advancement of Science, assembled at Sheffield, to admit that what he had heralded forth to the world, with a great flourish of trumpets, as the long sought-for primal form of organized matter, was, in reality, nothing more than a simple precipitate of sulphate of lime.

From Haeckel's moneron, "the infinitely long series of slowly and gradually differentiating animal forms," finally attained to the amphioxus, from that to the primeval fish, from the primeval fish to the first mammal, and again from the latter to man." This development of our species from the original speck of protoplasm which, away back in the Laurentian period, spontaneously evolved itself from a few favorably collocated atoms of carbon, oxygen, hydrogen and nitrogen, was, as might be expected, a slow process. Hence, we are informed, that "the organic history of the earth must not be calculated by thousands of years, but by palæontological and geological periods, each of which comprises many

¹ *The Evolution of Man*, vol. ii., p. 42.

² *Revue de Questions Scientifiques*, January, 1878.

thousand of years, and perhaps millions or even milliards of thousands of years."¹

It is true, that the high-priests of evolution or transformism are not at one as to some of the details of man's genealogy. Vogt traces our pedigree, in its earlier stages, through the annelids and earth-worms. Haeckel demurs to this, and affirms that at this stage of development our ancestors were ascidians and amphioxii.

But, however much evolutionists may disagree as to details, they are unanimous in asserting the animal origin of man. To bridge over the chasm between brute and organic matter, they invented the monera, which resulted from a fortuitous concourse of certain atoms of hydrogen, oxygen, carbon, and nitrogen. The nearest living analogue of this primitive form of protoplasm is, Haeckel assures us, the ill-starred *bathybius* of Huxley. To bridge over the chasm between the irrational and the rational, between animals and man, they invented the anthropoid, or the pithecanthrope, the speechless man-ape, of which, like so many other links in Haeckel's genealogical chain, there is not the slightest trace in geology or palæontology.

Juvenal ridiculed the credulity of those who believed that Mount Athos was sailed through of yore:

. creditur olim
Velificatus Athos

but how much more deserving of the satirist's derision and invective are the fantastic teachings of those who declare that brute matter can of its own motion bridge the chasm that separates it from sentient and conscious beings! Truly, "beyond all credulity is the credulousness of atheists who believe that chance could make the world, when it cannot build a house."

But the theory of descent advocated by the evolutionary school of science requires the existence of these links, and we are told to look to the future for their discovery. This is about as satisfactory as Haeckel's defence of spontaneous generation, which is one of the prerequisites of his hypothesis. Spontaneous generation, in spite of the crucial experiments of Pasteur, is, Haeckel assures us, still going on, but at the bottom of the deepest oceans, and in other places to which access is barred to the investigator. Similarly, man, as man, as well as the all important missing link—*alalus*—had his origin in Lemuria, an imaginary continent now at the bottom of the Indian Ocean, far out of reach of the modern fossil-hunter; and thus we shall forever be denied the privilege of looking upon any of the relics of our venerable ancestors, or of their immediate progenitors, a race of catarrhine apes long since extinct.

¹ *History of Creation*, vol. ii., p. 337.

Mark Twain, in his "Innocents Abroad," laments the absence of a monument to the memory of our common ancestor—Adam, something that the world, for some unaccountable reason, seems to have lost sight of until its attention was directed to the matter by the great American humorist. Haeckel seems even more solicitous about the memory of the primitive plasson—the *Bathybius Haeckelii*—from which, he will have it, humanity is descended. According to the professor of Jena, we are indeed an ignorant and ungrateful offspring.

And yet these advocates of the animal origin of man are proud of the favored mud-fish and of the ambitious sea-squirt to which they trace back their ancestry. This is not a libel on them because they take pains to inform us of the fact. "It is better," says Claparède, "to be a perfectionated ape than a degenerate Adam." To this sapient utterance of the Swiss naturalist, Haeckel, Vogt, Büchner, and their disciples say "Amen," and all further discussion is pronounced impertinent.

But a little reflection will teach us that the Monists, or Transformists, whose views we have been considering, have "method in their madness." They assume evolution, in the sense in which they teach it, to be true, and to rest on an impregnable basis of fact. They assume also that matter is eternal, because science, by which they mean physics, can tell us nothing, because it knows nothing, of creation. They pin their faith to spontaneous generation because their theory demands it. "If we do not," says Haeckel, "accept the hypothesis of spontaneous generation, then at this one point in the history of development we must have recourse to the miracle of a *supernatural creation*."¹ But this is something that cannot for a moment be admitted. For the professor of Jena continues: "To me the idea that the Creator should have in this one point arbitrarily interfered with the regular process of development of matter, which, in all other cases, proceeds entirely without his interference, seems to be just as unsatisfactory to a believing mind as to a scientific intellect." Carl Vogt endorses these views when he declares: "There can be no doubt that Darwin's theory ignores a personal creator, and his direct interference in the transformation and creation of species, there being no sphere of action for such a being." The notorious French Darwiness, Madame Clemence Royer, proclaims the same doctrines with even greater crudeness and barbarity. With her, creation is impossible, contradictory, unimaginable, and the Creator—"the absolute" is her word—has no existence, but is simply the last term of regression of an order purely logical, which does not correspond to any ob-

¹ *Op. cit.*, vol. i., p. 349.

jective reality.¹ In lieu of a Creator, Virchow tells us "the process of life, both in its beginning and in its repetition, must be referred to a special kind of mechanics." For we must understand that "at a certain period of the earth's evolution unusual conditions supervened"; that "a thousand circumstances, which we are now unable to produce," existed; that under such conditions and under such circumstances certain "elements entering into new combinations, *in statu nascente*, assumed the vital movement, and thus the ordinary *mechanical* conditions were formed into vital ones."²

But the truculent Büchner, impatient of such euphemistic phraseology, expresses himself more bluntly, if not more positively. "The belief in God," he tells us, is a creation of "the uneducated human mind" arising "from defective knowledge of the laws of nature,"—a disposition on the part of man to refer what he cannot explain in a natural way to an invisible, mysterious cause. "Science," he affirms, "is a continued struggle with this notion, and with every step she makes forward she drives back the belief in supernatural forces, or the need of such belief, into more remote and untenable positions. Hence every science, and especially every philosophy, that seeks reality instead of appearance, truth instead of pretence, *must necessarily be atheistic*; otherwise it blocks up against itself the path to its end, the truth. As soon, then, as in a *philosophic* book the word "God" occurs, except in criticism or reference, one may confidently lay it aside; in it will be found nothing capable of promoting the real progress of knowledge. In properly scientific works the word will seldom be met with, for in scientific matters the word "God" is only another expression for our ignorance."³ Hence, says the blasphemous Carl Vogt, "we must dismiss the Creator without ceremony, and not leave any more the least place for the action of such a being."

Here, as in our preceding paper, we see Rationalism run wild. With Strauss and his school it issued in Atheism and Nihilism; with the leading German Transformists it results in Monism and an explanation of the universe by a "special system of mechanics."

But whether the subject of study be philosophy, theology, science, or Sacred Scripture, the object of the Rationalist is ever the same,—to minimize the supernatural, or to relegate it, as the outgrowth of ignorance and superstition, to the domain of myth and fable. Anything, therefore, that refers directly or indirectly to God or religion; anything that bears on the authenticity of the

¹ *Origine de l'Homme et des Sociétés*, p. 6.

² Büchner, *Force and Matter*, pp. 176 *et seq.*

³ *Man in the Past, Present and Future*, p. 329.

Bible or the integrity of Christian dogma ; anything that will tend, even by implication, whether by distortion of facts or suppression of the truth, to cast discredit on the traditional teaching of the Church, or shake the faith of her children, is eagerly seized on, as if the highest act of virtue and the sole end of science were to banish forever from the minds of men the very idea of God.

That which M. Gustave Flourens wrote, the scientists of the Monistic school imply, if they do not express it in words : " Our enemy is God ! Hatred of God is the beginning of wisdom. If men would make progress it must be on the basis of Atheism." ¹

From what we have already seen, and from what we shall learn in the sequel, the subject of the antiquity of man is one that has been particularly grateful to the skeptics and the scientific Atheists of our day. They fancy they see in the disproof of the Scriptural chronology a condemnation of the traditional teachings regarding the Adamic origin of the various races of the human family, if not a demonstration of the falsity of the entire Bible as a divinely inspired record. A certain class of geologists and prehistoric archæologists, especially, have taken this view of the question, and hence have bent their best energies to show that the teachings of their science are utterly irreconcilable with any of the accepted systems of Biblical chronology, and would now have us believe that they have succeeded without peradventure in their purpose. They display the animus that actuates them in their investigations by their inability to refrain from giving frequent expression to their contempt for the Inspired Record and for those beliefs which have so long been the solace of many millions of our race. This is particularly so in the case of the question under discussion. They affect to be surprised that any one endowed with ordinary reasoning power, or the faculty of weighing the simplest kinds of evidence, should any longer find anything in Scriptural chronology to claim his assent, or to stand in the way of his unreserved acceptance of the prevailing teachings of the evolutionary school of geology and anthropology regarding the age of human kind.

We have been thus explicit, in what precedes, in exhibiting the character, views, and methods of the modern scientists from whom we have quoted at some length, in order that what shall follow may appear in its true light, and in order, too, that the reader may appreciate the nature of the pressure that is brought to bear on many votaries of science, who have no sympathy whatever with the principles of the Monistic and Atheistic school which we have been considering. Without these prefatory observations it would

¹ Quoted by W. S. Lilly in *The Great Enigma*, p. 68.

be impossible to understand the attitude of contemporary geologists and prehistorians, of those, even, who make profession of Christianity and belief in the Book of books as a divinely inspired record, regarding the question of the antiquity of man in its connection with the reputed teaching of the Bible on the subject.

What, then, does modern science—and by this term we mean conservative, veritable science, and not wild hypothesis and fantastical speculation—teach concerning the age of mankind? What answer has geology, and that newer science, prehistoric archæology to give to a question which has excited such interest and received such attention during the last third, we might say during the last half, of a century? What is the nature of the evidence offered in elucidation of this much vexed subject, and what is the value of the testimony by which the case is to be adjudicated? What kind of chronometers do geologists and archæologists employ? Are they reliable, or are they utterly lacking in all the elements of certitude? What are the criteria by which we are asked by scientists to be guided in arriving at a conclusion respecting this all-important problem, and are they of such a character as to command the assent of one whose reason tells him that he must be governed in his researches by at least the ordinary laws of dialects? Let us see.

The evidence usually adduced in support of the great antiquity of man is based on observed geological and geographical changes, on changes in climate, on changes in the fauna, and on changes in the objects and implements of human industry, which have taken place since man's appearance on earth.

One of the indisputable facts, it cannot be gainsaid, of geologic science, is the fact of the very recent origin of our race. Man, according to the almost universal teaching of geologists and archæologists, did not appear before the opening of the Quarternary Age. But this age, whatever may have been its duration in years, is conceded on all hands to have been incomparably shorter than the various ages that preceded it.

Some decades ago, it was thought by many—among them by the learned French archæologists Abbé Bourgeois and Abbé Delaunay—that man existed during the Tertiary Age. Thence the long and heated discussions about Tertiary man, who, a few years ago, occupied such a prominent place in periodical literature. The question has lost the interest which it formerly possessed, although there are not wanting, even now, prominent men of science who believe, or affect to believe, in the existence of Tertiary man. The evidence, however, in support of the theory that man existed before the Quarternary Age is so slight and inconclusive that even those whose preconceived notions would incline them to favor the theory

of Tertiary man, are forced to declare that we must await further light on the subject before a final decision is warranted.

But, truth is, the death-blow to Tertiary man, at least in France, was dealt by the Scientific Congress held at Blois, in 1884. At the conclusion of a long and heated debate, and after a visit to Thenay, where Abbé Bourgeois had discovered, in 1863, his alleged relics of Tertiary man, and a thorough examination of the flint-flakes that had been imagined to be of human handiwork, the section of anthropology, composed of forty members, declared, with only one dissenting voice, that the proofs in support of the learned Abbé's theory were entirely inadequate. It is true that even after this, M. Mortillet insisted that if the flints of Thenay were not the products of human industry, they were at least the work of some intelligent creature. So convinced is he of this that he does not hesitate to ascribe them to an imaginary being whom he burdens with the name of *Anthropopithecus*, who, he will have it, was man's immediate predecessor, and the missing link for which geologists and archæologists have so long been seeking. But M. de Mortillet, if not alone with his *anthropopithecus*, has but a small following; for, as far as any evidence goes, his pretended precursor of man is fully as mythical as Tertiary man himself.¹

But if man did not live during the Tertiary Age, it is quite certain that he was contemporary with many species of animals that are long since extinct. He, therefore, existed during one of the geological periods, properly so called—the Quaternary—because the Recent period, as understood by geologists, was not ushered in until the disappearance of the animals now found in a fossil state. In this connection it may be observed that a fossil, in scientific terminology, is any organic body buried in the earth at a period preceding the so-called Recent period in which we now live. But the existence of man during the Quaternary Age does not, as has been so often stated, presuppose for him a greater antiquity than is consistent with a legitimate deduction from the chronological facts of Scripture. The truth of this statement will appear as we proceed.

Among the geological and geographical evidences advanced in support of man's great antiquity are those supposed to be afforded by alluvial deposits, peat-bogs, stalagmitic formations, and by oscillations of the earth's surface.

¹ Cf. Appendix by H. W. Haynes, in Wright's *Man and the Glacial Period*; "La Question de l'Homme Tertiaire," by Abbé Bourgeois, in the *Revue des Questions Scientifiques*, 1877; "L'Homme Tertiaire," in the same *Revue*, January, 1889, by Abbé Arcelin. See also "L'Homme Tertiaire," in the *Dictionnaire Apologetique de la Foi Catholique*, per Abbé Jaugey, and chap. ii., of Abbé Hamard's admirable work, *L'Age de la Pierre et l'Homme Primitif*.

In various parts of Europe and America, not to speak of other portions of the globe, relics of man and of human industry have been found entombed at various depths in layers of clay, sand and gravel, which have been deposited by flowing water. In deposits made by rivers and streams it has been contended, and, at first sight, quite naturally, that all that was necessary to determine the age of human remains in fluvatile detritus was to find the average rate of deposition per annum. Thus, if an arrowhead or a stone hatchet were to be found in an argillaceous stratum at the depth of five feet, and it were known from a number of observations that the mean annual rate of sedimentary accumulation was one inch per annum, the inference would at once be drawn that such implements were left in the place where they were found, sixty years ago. Such reasoning would be perfectly just if we could be certain that the same conditions obtained throughout the entire sixty years as during the period of observation.¹

If there were a question of only sixty years, as in the instance given, there might not be much room for doubt. When, however, there are thousands and tens of thousands of years to be considered, the case assumes a new phase. Then the uniformitarianism, of which Sir Charles Lyell was such an ardent champion, makes greater demands for our acceptance than the known facts of geology and physical geography will justify. For we know as a fact that the rate of fluvial deposition is far from being the same in different times and places; that in France, for instance, it was far greater during the first centuries of the Christian era than it has been at subsequent periods. This is demonstrated so plainly, both by history and archæology, that it is incontestable.

To give but a single case: the waters of the Somme, according to M. de Mercy, who made a special study of this river, were, during the Roman period, fully fifty times as abundant as they are now. During the Quaternary Age the deposition of alluvium must have been far more rapid than at any time since. In consequence of the great humidity of the atmosphere, the precipitation was then ten or twenty times as abundant as it is at present.² Indeed, so exceptionally active, during the Quaternary period, were the agents of erosion and transportation that nothing which we may now witness can give us an adequate idea of their power and violence unless it be an occasional torrential storm in the tropics

¹ So difficult, indeed, is it to make any calculations worthy of acceptance regarding the rule of formation of fluvatile deposits that a distinguished scientist, in referring to the chronological supputations based on the monuments buried in the valley of the Nile, does not hesitate to assert that a "Fellah, who makes a dam around the lower end of his field, can, in one year, introduce a few thousand years into the cleverest calculations of a European savant."

² De Lapparent, *Traité de Géologie*, p. 1283.

or a destructive cloud-burst in the mountains. For this reason alone, not to speak of others, we can declare with certainty that none of the remains of man thus far discovered in the alluvium of either Europe or America, can be produced as proof that the age of the human race is other than that which is indicated by the chronology of the Sacred Record.

The peat-beds of the Old and New Worlds have likewise been appealed to as chronometers for settling the question of the age of man, at least in the localities which have yielded undoubted human remains.

But here, as in the case of alluvial deposits, we are confronted with a fundamental difficulty—that of estimating the growth of peat-formations. The most divergent results have been arrived at by different investigators, varying greatly according to the localities studied.

According to Lyell, the rate of growth of peat is of extreme slowness. M. Boucher de Perthes, as the result of his investigations, came to the conclusion that it was not more than four centimeters per century. Having found in the Somme valley specimens of Roman pottery, sixty centimeters below the surface of a peat-bed eight meters in depth, he calculated that the time required for the formation of the peat, assuming that the pottery was fifteen hundred years old, was no less than twenty thousand years. The error in the computation was, in assuming that it required fifteen hundred years for the growth of the peat overlying the pottery. The time demanded may have been, and undoubtedly was, far less than this. From what we know regarding the rate of peat formation in other places, there is no reason for believing that the time actually consumed in the growth of the peat above the pottery was more than two or three centuries at most. Boucher de Perthes assumes as known what in reality is a totally unknown quantity, and hence his supputations are vitiated and count for naught.

In America, according to Andrews, peat is formed at the rate of twenty to twenty-five inches per century—from twelve to fifteen times as rapidly as was imagined by Boucher de Perthes. In Ireland it has been known to grow at the rate of two inches per annum—more in one year than the French savant allowed for a hundred. In view of these and other facts of similar import, M. Rioult de Neuville, an acknowledged authority on the subject, does not hesitate to assert: "It seems proven that, under favorable circumstances, the thickest peat-bogs may have formed within a period of time not exceeding one or two centuries, and in those places even where, in our day, for lack of the conditions essential to its development, it is no longer produced." For this reason, therefore, we are fully warranted in rejecting entirely the exagger-

ated statements of Lyell and others regarding the length of time required for the growth of peat, and substituting hundreds for the thousands of years their calculations demand. Even geologically speaking, peat is of very recent origin, and it is quite futile to attempt to deduce from any human relics found in it, an argument for the great antiquity of man, or against the Biblical chronology.

In the stalagmitic deposits of certain caves, especially in Europe, have been found human remains associated with those of animals now extinct. These relics have long been thought to indicate a great antiquity for our race, but the reasoning by which this conclusion is arrived at is fallacious, for two reasons: First, because it assumes that the extinct animals, whose fossil remains are found alongside those of man, existed at a much earlier period than the facts of the case will allow. Secondly, it is taken for granted that the rate of deposit of stalagmites in the caves in question was much slower than is known to be the case elsewhere where the conditions are not dissimilar. The truth is, we encounter the same difficulty here as in our attempts to measure time by the deposition of alluvium, or the growth of peat. Thus, according to one author, a million years were required for the deposition of the carbonate of lime on the floor of the celebrated Kent cavern in England, while according to another authority, equally competent to give an opinion on the subject, a period of a thousand years was all that was necessary.

As in the case of alluvial deposits, there is every reason to believe that the rate of formation of stalagmites during the Quarternary age was much more rapid than it is at present. There was then more moisture in the atmosphere, and consequently a greater abundance of water percolating through the limestone formations in which the caves are found. The natural result, under such conditions, would be that quite thick deposits of calcareous matter would be formed in a comparatively short time. Visitors to the Yellowstone National Park know how rapidly, at the Mammoth Hot Springs for instance, calcareous and siliceous deposits are made. Objects placed in these waters are heavily incrustated in a few days. The conditions here are, it is true, exceptionally favorable, but it would be rash to assert that they were not equally favorable in some of the caves in which human remains have been found, and which belong to the Quarternary or even to the Recent period.

For this and other reasons, we declare with de Lapparent, that there is no foundation whatever for "generously distributing among the different phases of the Quarternary epoch the hundreds and thousands of centuries," as has so long been the vogue of a certain school of geologists. And, contrary to the findings of this

same school of geologists, we are unable to see in any of the fossil cave-men, or other human remains, found in the caverns of Europe, any evidence whatever for that fabulous antiquity of the human race that has so often been claimed for it. Nothing, to our mind, has yet been discovered in any of the caves that in the slightest degree tells against the teachings of scriptural chronology regarding the age of our race. We may concede to the remains of man found in the drift, in caves and peat-bogs, an antiquity of three or four thousand years, but, so far, we have no irrefragable evidence of such antiquity. We may admit, even, that cave-men—troglodytes they have been called—existed in Europe three or four thousand years B.C., and still they would have been posterior, according to a chronology that we may accept, by a thousand years to colonies established by the descendants of the patriarchs along the valleys of the Nile, the Tigris, and the Euphrates, and probably, also along those of the Ganges, the Indus, and the *Brahmaputra*.

For the sake of argument we may go yet further, If the evidence from science were forthcoming, we should have no hesitation in believing that parts of Europe were inhabited in antediluvian times. Indeed, the science of linguistics, and the existence of the Basques and Finns, who have no connection with the great Japhetite, or Aryan branch of the human family, seem to point to prediluvial migrations that may have antedated the Christian era six or seven thousand years. But until geologists and archæologists shall have produced much stronger evidence than anything that has yet been offered, regarding the age of man in Europe, we shall feel that there is little difficulty in reconciling the age of human remains found in the peat-beds, caverns and gravel-pits with the chronology of the Bible, as it is usually given for post-diluvial not to speak of antediluvian times.

Certain oscillations of the earth's crust, which have notably affected the contour of the surface of the globe, which are assumed, or, it may be, which are known to have occurred since the advent of man, have frequently been signalized as arguments in favor of a greater than Biblical antiquity of man. But here, as in the other instances which we have considered, the flaw in the argument consists in taking for granted the validity of Lyell's uniformitarian theory, and in considering as a known that which is positively an unknown, and in most cases, an indeterminable quantity. All cataclysmic action is denied, and this in spite of the fact that we have numerous striking evidences of its reality within historic times, not to consider those that obviously pertain to the domain of prehistory.

The coast-line of various parts of the world, as the reader is aware, is continually changing by reason of the elevations and sub-

sidences of the earth's crust, which are always in progress. In consequence of these oscillations, the sea at some places encroaches on the land, while at others the land rises from the sea. For this reason the coast line of France is quite different from what it was in the time of Cæsar, and for this reason too, the topography of certain parts of Southern England is quite changed from what it is known to have been a few centuries before the Christian era. According to Diodorus Siculus, the Phœnicians who voyaged to Cornwall for tin, were able at low tide to transport the metal to the Isle of Wight dry-shod. Such a thing, as every one knows, would now be very far from possible. There is no doubt, moreover, that the British Isles were formerly connected with the continent of Europe, and probably too, only a few centuries before the intrepid navigators of Tyre and Sidon betook themselves to the far-off Cassiterides in quest of that all-important constituent of bronze which in their time was known to exist in large quantities only in this *Ultima Thule* of the then known world.¹

Lyell, basing his conclusions on observations made along the coast of Sweden, thinks that the rate of elevation of land does not amount to more than two or three feet in a century.² Here again, true to his uniformitarian theory, he assumes that the rate of upheaval is regular and, in the long run, practically the same in all parts of the earth's surface. But such an assumption is demonstrably false. Not only is there a variation in time, but also a variation in places quite contiguous.

To cite but one instance from among many similar ones that might be adduced, illustrating the nature of the argument based on oscillations of the earth's crust, which are assumed to have taken place since the appearance of man, we shall give a typical case, often referred to, which was brought to light in Sardinia. Here, at an elevation of about ninety meters above the sea-level, products of human industry were found in deposits of undoubted marine origin. Assuming that the rate of upheaval was one meter a century, the conclusion was that man lived in Sardinia full nine thousand years ago. The calculation, however, was nullified, not only by the assumption of a regular rate of elevation of the land, but by the assumption of regularity of movement in a part of the world where earthquakes and other cataclysmic actions are of frequent occurrence. But this is not the most serious objection

¹ Wilkinson suggests that the Egyptians may have obtained tin from India or Spain long previously to this period. There does not, however, seem to be any evidence that the Phœnicians had any knowledge of the mines of India, while those of Spain, even if worked, would have supplied only a small fraction of the metal they actually used.

² *Antiquity of Man*, p. 58, and *Principles of Geology*, chap. xxxi.

urged against the computations based on the remains here found. It was discovered on a more careful examination, that the accumulations of marine shells, pottery, etc., at the height stated, were not necessarily any evidence whatever of upheaval. On the contrary, there are now the strongest reasons for supposing that these deposits are similar to the shell-mounds or kitchen middings of Denmark, and that they may originally have been at the same altitudes above sea-level as they are at present.

The cataclysmic causes of upheaval and subsidence are indeed of much more frequent occurrence, and affect much greater areas of the earth's surface than the uniformitarian school of geology would have us believe. As cases in point it will be sufficient to recall instances with which every one is familiar, and which do not date back more than a few years: of islands suddenly rising from the bed of the ocean, and as quickly disappearing; of earthquakes whose effects embraced areas of hundreds, and often of thousands, of square miles; of volcanoes whose eruptions occasioned untold losses of life and property. As special instances of an earlier date we may signalize the elevation of a considerable part of New Zealand during the night of the 23d of January, 1855, and the uplifting in Chili, in 1822, of fully 200,000 square miles of territory, between the Andes and the coast, to a height of from two to seven feet; of the memorable earthquake at Lisbon in 1775, whereby no fewer than 60,000 persons perished in the space of six minutes, and whereby a large portion of the city was permanently engulfed 600 feet beneath the waters of the bay, and of the still more destructive earthquake that visited Calabria in 1783, which occasioned the death of 100,000 persons and was felt throughout the greater portion of Europe.

If such sudden and extensive changes in the configuration of the earth's surface have taken place during the short period of time of which we have a record, how many other, and even greater, changes may not have occurred in times prehistoric? And if we have such evidence of catastrophic action during the Recent Period, which all authorities admit to be one of remarkable quiescence, geologically speaking, what may we not believe of the period immediately preceding—the Quaternary—which affords so many indications, especially towards its close, of having witnessed oscillations and disturbances, by the side of which all subsequent changes were comparatively insignificant? The wonder, then, is not that the surface has undergone so many and so violent mutations since the advent of man, but rather that the revolutions experienced have been so few. Certain it is, that far from being an argument for the great antiquity of the race, the changes referred to rather corroborate the view of those who think that 5000 or

6000 years are amply sufficient to explain all the vestiges of pre-historic man, not only in America but also in Europe.

We come now to a more interesting phase of our subject—the argument for the antiquity of man that is based on the changes of climate that are supposed to have supervened since his appearance on our planet. To do justice to this part of the discussion would require a special article, or more truthfully a special treatise; hence we must be satisfied with merely indicating a few of the reasons that have connected the age of our species with climatic changes.

The whole argument hinges on the celebrated glacial theory about which so much has been written but regarding which so little has been definitely ascertained. Men of science are not yet agreed as to the cause of the Ice Age, still less are they able to tell us how long it prevailed. More than this, those who have studied the matter most carefully are yet undecided as to whether there was one or several glacial periods. The opinions held by individual investigators depend entirely on the point of view which is taken or on some preconceived notion which has been raised to the dignity of a legitimate working hypothesis.

The theories that have been brought to bear on the subject may be divided into two classes—cosmical and terrestrial, or astronomical and geological; and of these there are nearly a dozen, all having able advocates, and all claiming recognition.

It is an indisputable fact that there has been since the close of the Tertiary Period, and probably since the apparition of man, what has been called a Glacial Period, or an Ice Age. If man did not witness the beginning of this period of low temperature and extensive glaciers and ice-sheets, it seems certain, as all geologists and archæologists acknowledge, that he lived during a portion, probably the greater portion, of the period. The interesting part of the problem, so far as it concerns our present subject, is to determine just when the Ice Age began and how long it endured.

According to the theory so ably advocated by Lyell in his "Principles of Geology," the growth and distribution of glaciers are to be attributed to the changes in the distribution of land and water over the earth's surface. As these changes must have been very great to produce the glaciation we know to have existed, and as mutations of this character must, according to the distinguished English geologist, have taken place with extreme slowness, we are asked to believe that the inception of the reign of Ice dated back several hundred thousand years at least. Glacialists, like James and Archibald Geike, tell us that great areas of Europe and North America were then "drowned in a wide-spread *mer de glace*," at-

taining in Norway a thickness of six or seven thousand feet,¹ and giving rise, when sent adrift into the waters of the Atlantic, to "whole argosies of Icebergs," in comparison with which those now furnished by the ice-seas of Alaska and Greenland sink into insignificance.

Croll, adopting the astronomical theory of Adhémar, attempts to fix exactly the number of years that have elapsed since the beginning and end of the last Ice Age. An estimate of this kind based on Lyell's theory is impossible, both by reason of the complexity of the problem, from a geological standpoint, and because of the utter absence of any reliable chronometer.

According to the astronomical theory, of which Croll, James Geike, and Sir Robert Ball are the chief English exponents, the cause of the Ice Age, or rather of the ice ages, because the theory supposes a succession or "groups" of them, to use Ball's term,² is to be sought in the climatic changes due to the precession of the equinoxes, and to the variations in the eccentricity of the earth's orbit. To this may also be added, as a less potent factor, the variations in the obliquity of the ecliptic. Thanks to the investigations of Leverrier, Poisson, Lagrange, and other eminent mathematicians, astronomers are able to compute with great accuracy the periods of these variations, both for past and future time.

The precession of the equinoxes, which gradually alters the relative lengths of winter and summer, has a period of 21,000 years. According to the theory which ascribes glaciation to the precession of the equinoxes alone, there should be alternately, in the northern and southern hemispheres, an ice age every 10,500 years. Geologists, most competent to interpret the facts of their science, deny the existence of such a series of glacial periods, for the simple reason that they are not warranted by any evidence so far produced.

Croll, with whom Lyell and Lubbock substantially agree, seeks the cause of the Ice Age in the greater secular change occasioned by the variation of the eccentricity of the earth's orbit. This change, like the precession of the equinoxes, causes a difference in the relative lengths of summer and winter, but the difference due to variations of eccentricity are much greater than is possible by any change in the position of the line of equinoxes. At present, the difference is only seven days, the summer being that much longer than the winter, but a difference of full thirty-six days may be occasioned by variations in the eccentricity of the earth's orbit.

The period of this change is likewise much longer, and em-

¹ A. Geike, *Text-Book of Geology*, p. 890.

² *The Cause of an Ice Age*, chap. viii.

braces not only tens of thousands but also hundreds of thousands of years.

The last period of a state of high eccentricity, according to Croll's calculations, began two hundred and forty thousand years ago and persisted for one hundred and sixty thousand years, terminating, therefore, eighty thousand years ago. During the greater portion of this period the winters were more than twenty days longer than the summers, and the temperature, we are told, was many degrees lower than it is at the present time. Another high state of eccentricity, that next preceding the one just referred to, embraced a period extending from about nine hundred and eighty thousand to about seven hundred and twenty thousand years ago. Both Croll and Lyell at one time assigned the Glacial Epoch to this period, but subsequently they adopted the later period, which culminated about two hundred thousand years since. With this view, Sir John Lubbock and other glacialists are in accord. And as the Glacial Period was wholly or in great part subsequent to the Tertiary Period, and as man, according to the majority of the authorities, appeared immediately or shortly after the close of the Tertiary, we are called upon by the school of Lyell, Croll, and Geike to grant man an antiquity of at least two hundred thousand years, if not more.

The conclusions arrived at by Prestwich, one of the most eminent of English geologists, are quite different from those just enunciated. As the result of a careful examination of the subject, he declares that "The time required for the formation and duration of the great ice-sheets of Europe and America—the Glacial Period—need not, after making all allowances, have extended beyond fifteen to twenty-five thousand years, instead of the one hundred and sixty thousand years, which have been claimed." He also limits the time of the so-called post-Glacial Period, or of the melting away of the ice-sheet, to from eight thousand to ten thousand years or less.¹

Mr. G. Frederick Wright, in his admirable and exhaustive work on "The Ice Age in North America," sums up in one sentence the difficulty that confronts those who would attempt to fix even approximately the date of the Ice Age. He declares that "The sum of the whole matter, so far as theory is concerned, seems to be that, as yet, we do not know what was the ultimate cause of the Glacial period."² "Everything here," as he truly observes, "depends upon the forces which distribute the heat and moisture over the land surfaces." Owing "to the general state of uncertainty as to the laws regulating the absorption, retention, and dis-

¹ *Geology*, vol. ii., pp. 553, 554.

² P. 440.

tribution of the sun's heat upon the earth, it is by no means certain that when the winters of the northern hemisphere occur in aphelion they will be colder than now. Whether they would be so or not depends upon the action of forces whose laws cannot now be accurately calculated."¹

The same writer deprecates the idea of geologists abandoning their own field to accept the glittering results of celestial mathematics, and favors the leaving the discussion of the theories of ultimate causation of the Glacial Epoch "to where it belongs," not to astronomers, or geologists even, but "to the more enlightened meteorologists of the future."

Referring to the theory of a succession of glacial periods, he maintains that local glaciers are amply sufficient to account for all the facts observed. Le Conte concludes a discussion of the subject with the statement: "The evidence at present, therefore, is overwhelmingly in favor of the *uniqueness* of the Glacial Epoch."² These conclusions, "with reference to Croll's theory, are those pretty generally adopted at the present time by the American geologists best qualified to interpret the facts."³

From the foregoing we learn that neither geology nor astronomy can give any answer to the questions regarding the cause, time, or duration of the Ice Age. The opinions entertained on the subject by even the ablest exponents of these sciences are most diverse, and often as contradictory as they are extravagant. Are we then to remain in complete ignorance of these matters, or may we not expect information from other sources? We think the question may be answered in the affirmative. The light, however, will not come from astronomy or geology, but rather from a more neglected but nevertheless a more reliable witness,—history. This, after all, notwithstanding what scientists may say to the contrary, is the witness that we are ultimately forced to appeal to in nearly all the difficulties that arise in discussing the much vexed question of the age of our species.

Leaving aside the question as to the cause of the Ice Age, as not relevant to our present purpose, may not history afford us at least a portion of the information we are seeking concerning the time of occurrence, and the duration of that reign of ice of which we have, both in America and Europe so many and so striking traces? As for ourselves we are satisfied that it can, and we shall briefly indicate a few of the reasons for the faith that is in us.

Many, if not the majority of those who have treated of the Ice Age have taken for granted that the temperature which charac-

¹ *Op. cit.*, p. 427.

² *Elements of Geology*, p. 577.

³ Wright's *op. cit.*, p. 439, cf.; also Upham's paper on "Accumulation of Drumlins," in *American Naturalist* for December, 1893.

terized this period was much lower than it is at present, or has been during recent times. Such an assumption, however, is unwarranted. M. Charles Martin has shown that a lowering of the temperature by four degrees would be sufficient to explain all the phenomena of glaciation of the Ice Period. And this diminution of temperature may be regarded as a maximum, for it is a well-known fact, which no glacialist will deny, that moisture is even a more important factor in the production of glaciers than extreme cold. The river beds and the alluvial deposits of the Ice Age attest the fact that this period was one of great humidity, as well as one of reduced temperature; that if it was characterized by an extraordinary extension of ice-fields in both the Old and New Worlds, it was no less marked for the great precipitation which then prevailed, and for the immense volumes of water which then coursed along channels that now convey but little water, or are at times almost dry.

It is, too, a mistaken notion to imagine that we must go way back to the dim prehistoric past to find in Europe such a condition of humidity and reduced temperature. We have history to assure us that it obtained long after the advent of man in this part of the world; that we need not go back more than fifteen hundred or two thousand years to find climatic conditions quite different from those which are now prevalent, and winters whose rigors were far greater than anything that has ever been known in more modern times.

According to Herodotus, the climate of Scythia in his day was about like that of Alaska or Labrador in our own. It, as well as the country along the Danube, was completely frost-bound during eight months of the year. The summer was characterized by torrential rains, a reminder of which we occasionally have—but at rare intervals—in those inundations that carry death and destruction before them, and which, when they do occur, are looked upon as national disasters.

Cæsar's account of the climate of Gaul, of the rigor of its winters and of the excess of its rain-falls, is the same as that given by the Father of History regarding the region of the Danube. The testimony of Varro, Cicero, Strabo and Diodorus Siculus concerning the severity of the winters of Gaul are but confirmatory of that of Cæsar. So great, says Diodorus Siculus, is the cold of Gaul in winter "that almost all the rivers are frozen over, and natural bridges are formed, over which large armies with their chariots and baggage pass in safety." Virgil and Ovid say the same thing of the glaciation of the Danube and the Euxine. Ovid tells us that not only has he seen the Danube frozen over, but that he has witnessed the whole of the Euxine covered with ice, and that he

has walked on it when in this condition. More than this; he declares, that so intense was the cold that even wine congealed and was broken in lumps when drunk. Virgil and Horace testify to the low temperature which prevailed in Italy, and picture to us climatic conditions existing in their day, as far south as the Campania of Rome and the ramparts of Tarentum, such as now characterize the winters of northern Europe.

So intense was the cold of Scythia, declares Herodotus, that the ass, one of the hardiest of animals, was unable to live there. Aristotle makes the same statement about Gaul. For a similar reason, we are assured by Theophrastus, the olive could not be raised in Greece more than four hundred stadia from the sea. And according to the testimony of both Greek and Roman writers, the arctic rigor of the climate of Gaul made it impossible to cultivate either the vine or the olive.

During the first centuries of the Christian era the climatic conditions of the portions of Europe we have named, were, according to all contemporary writers who refer to the subject, essentially the same as they were in the times of Herodotus, Horace and Ovid. It is unnecessary to indicate how much the climate has since changed, how entirely different it now is from what it was when Aristotle taught and Virgil sang. In reading the accounts left us of the former intense cold of countries where the climate is at present so mild, we can almost imagine ourselves perusing the fanciful descriptions of some of our modern geologists and archæologists descanting on the rigors of the climate of the Glacial Period, when our troglodytic ancestors, clothed in the skins of wild beasts, shivering and suffering, huddled together in damp and gloomy caverns which afforded them their only available shelter from the biting blasts of winters that lasted for the greater portion of the year.

M. Fuster, who has made a profound investigation of the subject declares emphatically that, "If there is a settled fact of history, it is that of the extreme rigor of the climate of ancient Gaul. All testimonies, all opinions, all circumstances forcibly and unanimously proclaim the intensity of its cold, the superabundance of its rains, and the violence of its tempests. It is futile to contend against such a fact by invoking the aid of false notions, or prejudices, that are wholly without foundation. Like truth itself, it is sure, sooner or later, to be triumphant."¹ What M. Fuster here says of Gaul, can with equal truth be predicated of the other countries of Europe just mentioned; for from what we have already learned, they belong to the same category.

The change then from extreme cold to genial warmth has oc-

¹ Quoted in the *Dictionnaire Apologetique*, p. 215.

curred within historic times. Might we not, if we had the light of history to guide us back a few more centuries, or a few more thousands of years—for even the traditional chronology allows us this time—find all the rigor of climate, all the abundance of snow and ice, and all the excess of precipitation which geologists tell us were among the distinguishing features of that portion of the Quaternary Period known as the Ice Age? Our opinion is that we should. A mean annual temperature a few degrees lower than it is at present, and a more humid condition of the atmosphere, are, as we have seen, all that is necessary enormously to augment the volume of our water-courses, and to produce those mighty glaciers, that at one time in the indefinable past wrapped extensive areas of both the Old World and the New in a deadly mantle of ice. Given a slight variation in our present thermometric and hygrometric conditions, and we should in a short time, as meteorology teaches us, witness all the phenomena of the Glacial Epoch. And such a variation would effect in a few centuries—in a few thousand years at most—all the grand mutations for which geologists and archæologists demand tens of thousands and hundreds of thousands, yea, millions of years.

In view, therefore, of these facts, and of a growing conviction which we entertain, that many of the phenomena, which modern scientists are wont to refer to the early Quaternary Period, or at least to the remote and unknown prehistoric past, really occurred within historic times, we decline to accede to the extravagant demands made by geologists and archæologists. Many, it is known, fall into error because, forsooth, they have some pet theory to support, or because, by reason of their environment, they are the victims, unconscious, it may be, of delusions and of prejudices that color all their observations, and vitiate all their conclusions. The antiquity of man may be much greater than has hitherto been supposed, but the evidence invoked from climatic changes that are presumed to have taken place since the advent of man is not conclusive. Hence of all inferences drawn from such premises, we simply and unhesitatingly say, *non sequitur*.

Another specious argument often advanced in favor of the remote antiquity of our race is the occurrence of undoubted human remains with those of animals long since extinct. Among the animals whose remains have most frequently been found with those of man are those of the elephant, the cave-lion, the cave-bear, the Irish elk, the cave-hyena and the reindeer. But these animals, it was contended, all belonged to the geologic past—to the Quaternary Age at latest; and hence the universally received opinion that the appearance of man on the earth antedates by far the epoch assigned for his advent by the traditional chronology.

It has long been accepted as a fact that could not be gainsaid that man was contemporary with the mammoth. Remains of this species of elephant and human relics have been discovered in many places in Europe and America—especially in Europe—in the same deposits, and so commingled that it was regarded as certain that they belonged to the same epoch. And many were the ingenious theories that were evolved to account for the disappearance of this monster of “the forest primeval,” to which not the slightest allusion has been made by any record that can be regarded as authentic. In America, in Great Britain, and in various parts of Europe, bones of this giant pachyderm have been found in countless numbers. In Siberia the tusks are of such frequent occurrence as to give rise to a considerable traffic. All are familiar with the finding, in 1799, of one of these huge beasts encased in a large block of ice near the river Lena, on the border of the Arctic Ocean, and remember that the flesh was in such a perfect state of preservation that dogs and other carnivorous animals ate it with avidity.¹

The mammoth, according to the majority of geologists, was regarded as the oldest of the animals coeval with man which are now found in a fossil state. Hence, as it was supposed to have disappeared some scores of thousands of years ago, man, if its contemporary, would have a very hoary antiquity indeed. Passing over the divers explanations that have been offered at various times of the difficulty raised, it will be quite sufficient for our present purpose to state that some of the ablest living archæologists deny *in toto* the coexistence of man and the mammoth. Among these may be signalized the distinguished and venerable archæologist of Copenhagen, J. Steenstrup, and Prof. Virchow of Berlin. The former, as the result of a critical examination of “the discoveries in Europe, which are supposed to prove the contemporaneity of man with the mammoth, reached the conclusion that not only is the evidence inadequate, but, for climatic and geologic rea-

¹ This singularly well preserved specimen of the mammoth, or hairy elephant, as it is sometimes called, is now, as our readers are aware, in the great Museum of Natural History of St. Petersburg. It is by far the best specimen of the kind yet discovered. Some years ago, during a visit to the Czar's dominions, we had an opportunity of examining it, and whilst pondering over some of the thoughts suggested by this creature of another age and clime, we addressed ourselves to the curator of the Museum, a learned German savant, well known in the world of science as one of the ablest of European naturalists, and asked him how long, in his estimation, it was since the mammoth became extinct. “How long?” quoth he, “how long? Forty thousand years, fifty thousand years, a hundred thousand years.” He was not very positive about the exact number of years, as his answer indicates, but, like all the members of the school to which he belonged, he was an evolutionist of the most pronounced type; he affected to be certain that the lapse of time was to be measured by nothing less than multiples of tens of thousands of years.

sons, no such coexistence is possible.”¹ This opinion is cordially endorsed by Virchow, who, with many of the members of the German Anthropological Association, at their meeting in last August, went even further, and declared that “The Reindeer Period was the remotest to which they were willing to assign the appearance of man in Europe on existing evidence.”

According to the division of geologic time here referred to, the Mammoth Period was the first subdivision of the Quaternary Age. The Reindeer Period immediately followed. But the reindeer is still among existing animals. It did not become extinct, as did so many others that are alleged to have been contemporary with early man, but simply migrated to a colder climate. As all are aware, it is still found in large numbers in northern Europe, especially in Lapland. In Cæsar’s time it lived in much more southerly latitudes. In his “Commentaries” the Roman commander describes it as one of the strange animals in the Hercynian Forest.² The occurrence, therefore, of human remains in France and Germany together with those of the reindeer, would not be evidence of the great antiquity of man, for it would not necessarily carry back the age of our race more than a few thousand years at most. And as there is reason to believe that the reindeer kept to the forests of central Europe long after Cæsar’s time, we are evidently dealing with a species of mammal that belongs to the historic as well as to a geologic period.

What has been said of the reindeer may, in a measure, be asserted of the urus, cave-bear, cave-lion, cave-hyena and Irish elk. The urus is described by Cæsar, and at the time of the Roman invasion ran wild in Gaul. It has, however, long since become extinct. As to the cave-bear, there is reason to believe that it did not disappear until comparatively recent times. Certain it is that its remains have been found associated with those of some of our domestic animals. For this reason there are not wanting those who maintain, and not without show of reason, that the great bears referred to in the chronicles of the Middle Ages, were none other than the cave-bears, also remarkable for their size, of the geologist and archæologist. The documents referring to the cave-lion and the cave-hyena as belonging to the fauna of Western Europe have not the same authenticity possessed by those that make mention of the cave-bear, the urus and the reindeer. But the absence of all reliable historical data regarding them is, after all, no more than negative evidence. Considering to what an extent the whole of this part of the world was, even long after the time of the Romans, an immense *terra incognita*, it is not surpris-

¹ *Science*, February 10, 1893.

² *De Bell. Gall.*, vi., 26.

ing that these animals, like many others that are known to have existed during this period should have eluded observation, or been passed over *in silence*. In view of the fact that immense numbers of lions are known formerly to have frequented parts of northern Africa, where they are now rarely if ever met with, and in view of the further fact, that they existed in parts of Europe from which they have long since disappeared, far from being unlikely, it seems, on the contrary, quite probable that the king of animals, was one of the denizens of the forests of southern Gaul not only during the Roman period, but also at times long subsequent. We learn from the Greek writers that he formerly inhabited the forests of Thrace, Thessaly and Macedonia, and from this and other facts of like import, we feel fully warranted in considering him as being, in Europe, the contemporary of the known fauna of the historical period. Regarding the great Irish elk—*cervus megaceros*—whose remains are found in so many portions of the Old World, especially in France, Great Britain and Ireland, it suffices to say that everything known about him seems to point to his extinction within historic times. Certain ancient records referring to him inform us that he was much sought after by the Romans, who had him brought from regions so remote as England.

There is, then, no valid reason for attributing to the animals named the great antiquity so frequently claimed for them. And there is, consequently, no reason for insisting on the great age of mankind because human relics have been found associated with the remains of animals that have been extinct for a long time, it is true, but not certainly during those untold ages of which geologists and a certain school of archæologists speak. There is surely nothing surprising in the fact that a half dozen or a dozen animals—the contemporaries of primitive man—should have disappeared in prehistoric times, when a much larger number of mammals and birds—forty or fifty species, at least—are known to have become extinct within historic times.¹ The wonder is rather that the number of species that died out in prehistoric times was not far greater—that there was not a hundred or more of them—considering the long lapse of time that intervened between the advent of man in Europe, and the beginning of the historical period.

In the early part of the last century the island of Rodriguez, in the Indian Ocean, was, according to the French writer, Leguat, remarkable for the number and variety and uniqueness of its fauna.² Before the close of the century, it had so completely dis-

¹ See an interesting discussion on this subject in *Knowledge* for January, 1893. Cf. also *The Epoch of the Mammoth*, chap xi., and *The Recent Origin of Man*, by James Southall.

² See "Adventures of François Leguat," in the *Edinburgh Review*, for April, 1892.

appeared that Leguat's testimony regarding it was called in question. Long subsequently, however, certain fossil remains were found in the soil, which the eminent naturalist, Milne-Edwards, showed to be the relics of the identical species described by his fellow-countryman a century and a half before. The extinction of the bison in this country, where a few decades ago it roamed over our western prairies in herds of thousands, if not tens of thousands, is an example before our own eyes, of the short space of time required for the utter destruction of a numerous and powerful species. For this and similar reasons that it is unnecessary here to multiply, we should hesitate long before attempting to base an argument in favor of the great antiquity of man on the disparition of a few species of animals that are known to have been coetaneous with primitive man, but which, for all we know to the contrary, may have lived in historic as well as in prehistoric times.

J. A. ZAHM, C.S.C.

THE PRIMITIVE CREED OF MAN.

THE oft-reiterated assertion on the part of modern infidelity that the loss of religious faith neither necessitates a loss of hope in the future nor the lack of an incentive to a virtuous life in the present, has its basis in an assumption which may not be passed unchallenged.

We are told that we have no reason to despond, even if we do find the creeds of men subject to the same laws of growth and decay which govern all things human. Men's religions, this new prophet tells us, like their temples, were builded up only to crumble away under the flight of time and the shocks of change. Good they may have been for the age and the peoples amidst whom they flourished, but they were destined to be as evanescent as life itself. The reason of their having been lay in the imperfect apprehension of man's destiny natural to the race in the years of infancy, when the painful riddle of the earth was read in the language of childhood, and the puerile imagination of primitive man construed the mysteries of life into the hobgoblins of the nursery. Such was the origin of all creeds, each developing differently according to its special environment. But now that the race is budding into the flower of manhood and beginning to attain the use of virile reason, we must expect new standards of truth, a more perfect com-

prehension of man's place in the universe, and a more accurate measure of his moral needs and cravings.

We are not, however, to imagine that religion is dead. It has but evolved into a higher form. The creeds of the past were the chrysalides whence, in all the splendor and vigor of maturity, emerges the completer life, discarding as an old husk, no longer serviceable, the superstitions that at first enveloped it. Instead of the immortality of the individual hereafter, is to be substituted the immortality of the race here. Heaven has at last yielded to the onslaught of the Titans, and on the thrones of the celestial hierarchies sit the vigorous sons of earth. Hell, too, has succumbed to the conquering race, and its legions, which had before waged such awful warfare upon weak mankind, have fled before the piercing light of the new dawn like the shades of night out of which they were first born. Virtue does not receive its reward in the beatitude of the blessed, nor does the iniquity of the wicked find its torments in the punishment of the damned; but each virtuous act reaps its compensation in the glad consciousness that it is a treasure laid up for the perfect enjoyment of the race in that far-off millenium of "the power that makes for righteousness." Vice stands rebuked in the pang it inflicts upon the vicious, and in the fearful knowledge that it strikes at the future happiness of mankind. To be upright, self-sacrificing, pure, for the sake of the generations to come, is the measure of man's morality. Whatever this may cost him, be it comfort, ease, luxury, nay, even life itself, still is he to persevere in the broad aspiration and illimitable hope of the incomparable bliss and glory of human kind in those dim ages of the distant future. In this, we are told, lies an incentive to virtue as much nobler, broader, higher than the stimulus of a selfish individual reward in an unknown paradise hereafter, as the life of the race excels the life of the individual in height, breadth, and depth. In this consists the sublimity of unselfishness, the topmost pinnacle of virtue, the crowning glory of the world's religions. This is to be the magnificent goal of man's noblest ambition, for only in this is to be found the end and value of life.

Such is the proposed mission of the new cult, which it seeks to dignify by the title of religion. Magnificent, brilliant, tender, human, full of fair promises, it presents itself, claiming our allegiance and our faith. It invites us forth, it says, from the crumbling ruins of our ancient temples into the sweet sunshine and pure atmosphere of humanity's creed. Its words are fair, its aspirations lofty, its hopes noble, its promises alluring, and its prospects seem to presage victory. But, in spite of the glamour of new things, there is a conservative element in man's nature which constrains him to cling to the old, and while he may regard with wondering

eyes the beauty of the scene without, he still sits under the shadow of the ancient pile builded up by the dead hands of bygone faiths. If he desert this shelter, what guarantee has he of a better without? What is the innovator's warrant of superiority? May not these promises be but a specious delusion, a glamour of enchantment to dazzle, to deceive, and to betray? Doubt arises to assail the new truth or the new pretension. Is all this true which the voice of the nineteenth century announces to us as another revelation,—this time from below, not from above? Are all creeds of the past but the vain ephemera of the moment, only lower forms, out of which is now first issuing the perfect faith? Do men who yet hold by the old still wallow with the swine amid the husks, and has humanity, amid all these thousands of years, been wandering through a desert land following cloud and fire? Are we now only entering upon the land of promise, and is this new voice as the voice of one crying out in the wilderness, prophesying the coming of the new Messiah?

In this way we are told that the past is but a stepping-stone to higher things; that it is our dead self, whence we are sprung it is true, but which having performed the function of generation has passed forever into death. Within us the life, which it has transmitted, lives new-born, and we are to nourish it upon the promise of the future. The past religions of mankind are, therefore, but empty husks, from which the living creature that once breathed in them has fled forever. It is but natural, then, to cast them aside as we would our worn-out garments. This is even our imperious duty, if it be true that the winter of death has come upon them and shriveled them root and branch.

When we gaze over the field of the world's religious history, our skepticism seems to find confirmation. It is a scene of darkness and confusion. The dissonant clamors of conflicting creeds strike stridently on the ear. It is a field of slaughter and blood, where hate rages and might seems right. In the name of truth multitudes go down before the merciless steel of conquering faiths. Amidst strife and contention the new supplants the old. It is a war of extermination, where each side claims the sacredness of its own cause. Nations and their creeds rise and fall together. Religion, like all other things human, is in a constant flux, and history seems to write upon its forehead the same legend of mortality.

Surely there can be no truth where all is constant variation. We are seeking for the permanence of truth, which alone can resist the tooth of decay. When we turn to our own faith we are told that it, too, is as fleeting as any creed of the past; that it is equally subject to the laws of growth and decay, and if it seem in our

eyes to be of eternal value, so in the eyes of bygone peoples did their creeds appear as the sole deposit of truth everlasting. If we would cling to our own, even at the price of life itself, we have only to read their history to find examples of the same tenacious hold upon what they also believed to be the one only truth. The appeal to history seems to bring but one answer,—death is the end of all creeds, as of all life. What right, then, have we to expect more from our own when the golden fruit of the ancient promise has fallen into ashes in the hands of time? Is it not presumptuous to place our hope in the immortality of our own creed, however dear to us, when the history of mankind teaches us so plain a lesson to the contrary? It is in this strain that we are told that the supernatural is the superstitious; that the Christian belief in a personal God, who has given a divine revelation to mankind, may read its fate in the lesson so vividly taught us by the dead faiths of the past. Do these older creeds, in truth, force upon us this startling warning? What is the legitimate conclusion that may be drawn from their history?

When we first contemplate the varied scheme of man's religions the mesh seems inextricable. In the first moment of inquiry we naturally turn to the religious systems of Greece and Rome (which we will class as one for convenience) as of all heathen worships the creed most familiar to us. What do we find in these to serve as a clue to our problem? Our first feeling is one of utter helplessness. On every side we meet the grossest idolatry, so loathsome in its mythology that Prof. Max Muller has styled it "a period of temporary insanity through which the human mind had to pass." Their pantheons embraced gods of the most abject type, born it seems of every phantasy possible to a defiled imagination. Reason bestialized itself in the conception of such divinities, and an unclean fancy played unrestrained. In Zeus we see magnified force, endowed with all human vices and inflamed with the grossest human passions; he is cruel, revengeful, lustful, utterly regardless of all moral restraint; Hère is a jealous virago, vindictive and quarrelsome; Athène is merciless; Aphrodite the embodiment of sensuality, and her cult a celestial sanction of rites unmentionable; Priapus typified even lower bestial passions, and Dionysos was the divine embodiment of all dissoluteness; Phoebus Apollo knows no compassion, and Artemis is a passionless counterpart of her brother; both smite their rivals with relentless pleasure. Well might the period of Greek mythology be called an insanity of the human mind.

In spite, however, of the confusion and moral disorder that prevailed in the Olympian hierarchy, we do find a consistent meaning in Greek polytheism if we only look for it in the right direction. The Greeks inherited their pantheon, at least substantially, from a

people much older than themselves. It is now an established fact that all the Indo-European races are descendants of common ancestors, whom we first know as dwellers on the northern slopes of the Hindú-kúsh range of mountains in Central Asia. To them the Greeks and Romans have been traced. If we regard the Greek pantheon apart from its source, we shall have to give up all hope of ever unraveling its confusion. But through the aid of the science of philology the secret of the polytheistic creeds of all Indo-Europeans has been unlocked, and such a flood of light thrown in upon their religious systems as to clear the else utter darkness which had gathered so densely around them. Ancient Sanskrit is the language nearest in time and structure to the tongue spoken by the Aryan ancestors of the races in question. The sacred books of the Hindus, called the Vedas, are written in this ancient Sanskrit speech. Through the assistance of philology the names of the Greek divinities have been identified with the ancient Vedic gods, and in their Sanskrit form we find their etymological signification. In the Vedas the supreme deity is called *Dyaus*, signifying, in Sanskrit, the *sky*, from a root, *dya*, to shine. To this source the Greek Zeus has been traced. Atâna was a Vedic goddess, whose name means the *dawn*. In the light of this derivation how clear becomes the Greek myth of Athêne (*Atana*) springing from the forehead of Zeus. It is the dawn springing from the east, the forehead of the day. The legend of Apollo and the Python and of Vedic Indra and Vritra substantially correspond; they are only a common inheritance from an older creed, and in the light of their comparative mythology mean the victory of light over darkness or the sun dispersing the shades of night. Ouranos is the Sanskrit Varuna, the all surrounding heavens. The *Charites* or Graces are the Harits or bright courses of the sun. The Greek Erinyes (the Furies) in their original form were the Saranyu or dawn, which brings evil deeds to light. Hêre like Zeus signifies the gleaming heaven. Aphrodite or Anadyomene, the beautiful goddess who is born of the waters, is only another image of the dawn rising in the soft glow of early morn from the billowy bed of the murmuring sea. To the Greek, as to the Hindu, she was the goddess of perfect beauty. It is thus that the Greek pantheon may in substance be traced back to Aryan sources. It is, therefore, derivative in its character. In the names of the ancient Vedic deities, who are from the same primitive stock, is preserved the original signification of the Greek appellations. Through their etymology we thus arrive at their original character, and are enabled to interpret the myths that have gathered around them, like the fantastic shapes of clouds on the horizon at the rising and setting of the sun.

Therefore, to understand the Greek system in its proper mean-

ing it must be referred back to its parent stem. It is derivatively and fundamentally Aryan. The ancient Aryan religion, we discover from the Vedas, was a nature worship with the sun or sky as chief divinity, around which are grouped the deified forms of the lesser powers of nature. Sun, moon, earth, wind, storm and cloud are woven together in one diversified system, whose elements are as various as the manifold aspects which these phenomena assume during the course of day and night throughout the seasons of the year. Amongst the Aryans this nature worship was conscious, as the etymology of their divine names shows. To the Greeks Zeus did not mean the sky; they had long before lost the original signification of the name. But to their Aryan forefathers Dyaus had the very pregnant signification of the heaven, the Bright Shining One. Athène had long ceased to mean the dawn to the votaries at her pagan shrine, but Atâna was truly the Bright-Dawn rising from the morning sky to our Aryan ancestors in those distant centuries before they wandered from their ancient Asiatic home. With them physical nature under its thousand and one ever-shifting aspects was the object of a conscious worship, and as long as it remained conscious their creed enjoyed that unity which is to be found in nature itself. From this conscious nature-worship of the Aryans are derived the mythologies of all Indo-European peoples, and to this same parent-stem is to be traced the divinities of the Norseman in the extreme north of Europe and the gods of the Hindu in the extreme south of Asia. As the Aryan tribes migrated from their primitive Asiatic home westward or southward, each carried with it as a common inheritance the same religious system of a conscious nature-worship; but as the various tribes settled in the different countries where they had sought new homes, and gradually developed into the distinct peoples we afterwards find them, they lost the ancient meaning of their creed. Diversity of climate and location by degrees modified and expanded it into the divergent systems of mythology, which so perplexed the learned world until the light of philology came to explain them.

The polytheisms of all Aryan-descended peoples may, therefore, be justly reduced to the conscious nature-worship of their ancestors, who, looking out upon the world around them and finding the need of rendering divine homage in their hearts, fell down and adored the vast and mysterious system of nature. Not knowing, or having lost the knowledge of, nature's God, they worshipped nature itself.

Turning now to Semitic peoples, do we find in their mythologies anything to lead us to a like conclusion? Is there, as in the Semitic polytheisms, any clue to a fundamental unity by which their confusion may be reduced to order.

Beginning with the Egyptians, whom we may class as Semitic, although it is disputed whether they are not Turanian, how shall we approach so complex a system and one which is historically the oldest in the world? The multiplicity of Egyptian divinities at first naturally perplexes the investigator. If we begin by arranging its pantheon into deities of the first, second, and third class as is usual, we shall enter upon as futile as it is an endless task, for their name is legion. Let us enumerate the principle divinities and class them according to their proper attributes. The chief deity is Osiris; second in importance comes Horus, and third Ra or Phra. In these we have the sun represented under its three principal aspects, the setting sun, the rising and the midday sun. Ranking just behind these are Pthath, the life-giving power of the sun's beams, and Mandoo the fierce force of the sun's rays at mid-day when they beat down most powerfully upon the scorched earth. Pasht is a feminine personification of the sun's rays, a counterpart of both Pthath and Mandoo. Then we have Com, Moui, and Koms, who are called the sons of the sun, and who reveal him and carry his messages to men. In these we have another deification of the sun's rays. In Kneph is embodied the air god or the blowing wind, and who came, in time, to signify the breath or spirit. The great night deity is Thoth, the moon; Maut, the midnight sky, brooding silently, tenderly, and calmly over the sleeping earth is the universal mother. Nu personifies the blue sky lighted up by the brilliant midday sun. The morning sky typifying vigilance and endeavor, is called Sate; and Hather, the queen of love, is the evening sky, the faithful wife of the declining sun. Isis, who is represented as the sister and wife of Osiris is the great earth-goddess, and typifies the feminine principle throughout all nature, while grouped around her are a number of lesser deities of a more or less similar character.

In the above enumeration sufficient has been shown to bring clearly before us the fundamental character of the Egyptian system. Defined distinctly in it are three classes of deities, sun-gods, sky-gods and earth-gods. Ranking first in importance are the sun-gods, who held the chief central position in the pantheon. Around these as subordinates are grouped the lesser gods of the sky and earth. Egyptian polytheism was, therefore, principally a sun-worship, and although in the process of time the Egyptians, like the Indo-Europeans, lost all conscious knowledge of the primitive character of their system under the gradual accretions of a popular mythology, their religious system must have originally taken its rise from a conscious nature-worship of the objects personified in the later divinities of its pantheon. In Egyptian myth Horus slays Typhon, as Vedic Indra pierces Vritra with his keen

spear, as the Greek Apollo vanquishes Python with his swift and unerring arrows, and as the Norse Thor conquers the Jotuns, the powers of cold and darkness.

Like the Egyptian the Chaldean pantheon exhibits the same primitive elements. It is made up of sun, sky and earth divinities, the first mentioned taking precedence. In the first triad we have Anu, the hidden sun, the ruler of spirits and a far-off city, the Lord of Darkness, the Father of the Gods. Next in order is Bil, the midday sun, the emblem of royalty, like the Egyptian Phra. The third member is Hoa, the sun's rays, Lord of the abyss, lord of the great deep, the intelligent fish, akin to the Philistine Dagon. In the second triad rank Sin or Urke, the moon-god, San the disc of the sun, and Vul the air. Following these are the gods of the five planets Nebo (Mercury), Ishtar (Venus), Nergal (Mars), Bel-Merodach (Jupiter), Nin (Saturn).

The gods of the Caanite nations, under which term we may loosely class all Semitic peoples other than the Chaldeans, Egyptians and Jews, show the same characteristics; they are all personifications of the sun or his rays. Moloch, Baal, Chemosh, Baalzebub, are the sun or his rays under fierce and malignant aspects, to whom in propitiation human sacrifices must be offered; Thammuz is the softer and gentler aspect of the great luminary of Heaven. Ashtoreth or Astarte is the moon goddess and corresponds closely to the Egyptian Isis as an emblem of the receptive or feminine principle in nature. The inference to be drawn here is the same as was concluded from our examination of Aryan polytheisms: Semitic polytheisms are derived from a primitively conscious nature-worship with the sun as chief divinity, and in the course of time degenerated into a mythological system, in which the conscious element in time was entirely lost.

If we are to regard the early inhabitants of Chaldea and Egypt as Turanian, upon whom was engrafted Semitic stock, then the evidence, which the religious systems of these nations furnish, will go to show what was the primitive form of worship among Turanian peoples. But besides this we have accessory evidence from purely Turanian sources. "Taking Chinese," says Prof. Max Müller, "for what it can hardly any longer be doubted, the earliest representative of Turanian speech, we find in China an ancient colorless and unpoetical religion, a religion we might almost venture to call monosyllabic, consisting of the worship of a host of single spirits, the sun, the storms, the lightning, mountains, rivers, one standing by the other without any mutual attraction, without any higher principle to hold them together." And he adds, "that there was not only a primitive Aryan and a primitive Semitic religion, but likewise a primitive Turanian religion, before each of

these three primitive races was broken up and became separated in language and worship and national sentiment, admits I believe of little doubt."¹ Is this primitive Turanian religion anything like the primitive Aryan and the primitive Semitic religions?

In ancient Chinese poetry Heaven alone is called both father and mother of all things. In Chinese Tien means Heaven. In the Shu-King, Tien is called Shang-Te, High-Spirit. The Mongolian Teng-Ri, sky, is the same as the Chinese Tien. Chinese historians relate that the title of the leaders of the invading Huns was Tangli-Kutu, Son of Heaven. The title of the Chinese Emperor is Tien-Ze, Son of Heaven, which means Emperor by the Grace of God, and corresponds to the Tangli-Kutu of the Mongolians. Hence the Hunnish Tang-li or Mongolian Teng-Ri are the same in meaning as the Chinese Tien, Heaven. Chinese historians also bear witness that the Tulin, the ancestors of the Turks, were worshippers of the spirits of the earth, Pu-teng-i-li. Teng-i-li is the same as the Mongolian Teng-Ri, which, as we have seen is identical with the Chinese Tien; and this again we are told is akin to the modern Yakute word Tangara, sky or God. The Tungusic supreme divinity is called Buga, sky; the Samoyedas address their chief deity as Num or Juma; the Finns as Jumala, Juma, thunder and la, place, the place of the thunder or the sky; and the same word, we are furthermore informed by philologists, occurs in a modified form among the Lapps, Esthonians, Tcheremissians and Votyaks. The Num of the Samoyedes, who are classed as North Turanians, is identical with the Thibetan Nam of the extreme south Turanian group.² The evidence here adduced on the strength of the science of philology leads us to classify the primitive Turanian religion with the primitive Aryan and Semitic as a nature-worship with the sun as chief divinity.

So far our inquiry has led us to the discovery that the root of all ancient polytheism was a conscious nature-worship. We also observe that the original meaning of the creed, as expressed in its conscious element, loses itself in later developments. In the process of time the primitive form degenerates into an unconscious nature-worship, and grows finally into a cumbersome mythology. The Greek Zeus was a mythical being, but the Aryan Dyaus was the actual sky or heaven. The Greeks retained the name but lost the signification. The old Aryan faith possessed a visible bond of unity in the conscious knowledge that it was a direct nature-worship, enjoying the order and unity to be found in nature itself. The derived systems lost the knowledge of this principle of unity. That natural relation between the dawn (Atena) and the sky

¹ M. Müller, *Lectures on Science of Religion*, Lecture III.

² *Idem.*

(Dyaus) grew into a myth. It became Athène springing from the forehead of Zeus. In like manner the Egyptian system became mythical, and lost the original meaning. Horus vanquishing the Typhon takes the place of the sun dissipating the darkness of night, just as among the Greeks Apollo slays the Python.

The Chaldean system underwent the same changes. It was rooted in a solar worship overlaid by an accretion of myths to explain what had been lost in the lapsed form surviving. "Of the general character of the Assyrian religion," says Sir George W. Cox, "we have a terribly vivid picture in the Old Testament. It was a systematic sun-worship, which would assume the most lascivious and cruel aspects. The sun has been worshiped at first under a multitude of names; and as in the Aryan world, so here, each name in process of time became the title of a different god. Then Bel or Baal, and Moloch, the ancient Milcom, and the Sepharvaite Adrammelech and Anamelech, the Moabite Chemosh, and the kindred Shemesh and Shamas, all (like Nebo and Tammuz) titles of the sun, became separate deities by the same process which assigned Apollo and Helios, Perseus and Endymion, a distinct personality."

Amongst Turanian nations we discover the same process of growth or rather decay, from a primitive conscious nature-worship to a multitudinous pantheon, which loses its primary signification and visible bond of unity in the accumulated myths of ages.

In this process, universal to all polytheisms, we may observe a movement from simplicity to multiplicity, from unity to division. The development is both multiple and analytical. Gods are multiplied a hundredfold, and the same god is divided over and over again, until the many aspects and functions of the one in time become personified into as many distinct deities. Apollo, Hercules, Artemis are all sun-gods, Apollo, the bright, strong sun, striking from afar; Hercules the sun performing its various functions in the course of its diurnal journey; Artemis the milder, gentler aspect of the sun; Horus is the rising sun, vigorous and youthful; Ra the majestic midday sun, Osiris the setting sun going down into the realms of the dead. The Chaldean Anu is the sunken sun, Bil the midday sun, Hoa the sun's rays, and all the principle Canaanitic gods are either the sun himself or his beams under their manifold different aspects.

Primarily then we have one object of worship which becomes in the course of time divided into many distinct deities. In this we perceive a loss of simplicity and a descent from unity. The multiplicity goes on in direct ratio to the increase of time. The older grow the polytheisms, the larger the number of their divinities and the wider the divisions. Accompanying these changes is

the loss of the consciousness of the real object of worship and the gradual transfer of the cult from it to a host of mythical beings. The parent creed has an objectively real worship; its derivatives substitute fabulous creatures in its place. These facts, drawn from the internal character of the ancient polytheisms themselves, clearly indicate a movement in man's religious history outwardly from the common centre of a conscious sun-worship, and therefore away from unity. This process is analytical, not synthetical. In the source we find simplicity and unity, in the derivatives multiplicity and division.

To reinforce this conclusion we have another factor in ancient polytheism, which has not yet been considered; we have seen that all the pantheons of ancient peoples are rooted in a primitive conscious sun-worship. In all these various systems the sun-god holds the foremost place. But back of the sun-god looms the presence of one greater still. This distant god has no symbol and no altar; his cult is vague and rare. He was a hidden god, and seems to have been beyond the capacity of the popular imagination. He was regarded as too remote from men to concern himself about them or their affairs, and dwelt in mystery inaccessible to the human mind. Yet he was always present; never too distant not to be at last recognized. In spite of the popularity of the sun-god's worship, its strong appeal to, and its tenacious hold upon the imagination, that presence beyond could not be shut out. It brooded over the world and made itself felt, although man's face was averted. As light through the closed lid it made its presence known, though not seen. By the Egyptians he was called Ammon, the concealed god, "a recondite, incomprehensible divinity, remote from man, hidden, mysterious, the proper object of profound reverence."¹ His name amongst all the Semitic peoples of Asia, Chaldean, Assyrian, Canaanitic, and for the nomads of the desert was Il or El. Hence comes Eloah, identical with the Arabic Ilah, God. With the article Al-Ilah, it becomes Allah, the God of Mahomet. Like the Egyptian Ammon, Il or El had no temple and no sacrifice. He was worthy of the profoundest reverence, but too remote to be accessible to human worship. Behind the Chinese gods "there looms a supreme power, Lord of the Sky, Ancestor of all things." To the older Aryans he was Dyaus, superseded in the popular worship by Indra, the sun-god. While Thor and Baldur, sun-gods, were the chief objects of worship to the ancient Norsemen, Zio, Tew or Tir stood in the place of that Supreme Being so distant yet ever present. Back of Zeus and Jupiter was a higher still. For It there was no outward expression, except in the vague appellation Fate. It represented an

¹ G. Rawlinson's *Ancient Religions*, chap. i.

implacable, immutable will before which even the gods themselves bowed irrevocably.

In all polytheisms we discover this seemingly contradictory element, a dim conception of a Supreme Being back of the gods of the pantheon, universally acknowledged in spite of his remoteness and in spite of the firm hold rival gods had upon the popular imagination. Another striking fact may be added to this. We know of one ancient people whose religion was never polytheistic. The entire history of the Jews shows that their national and political existence was one prolonged struggle to maintain their monotheism. When all other peoples of the earth were, and had been for centuries, polytheistic, the Jews preserved their monotheism intact. Politically they were an insignificant tribe in the midst of great empires. With Egyptians, Assyrians, Phœnicians and other powerful peoples they came in constant contact and conflict, and yet, despite their adverse environment, this politically weak and despised people maintained the creed of Jehovah.

Thus the mythological polytheisms of the ancient world are seen to have taken their root in a system of conscious nature-worship, which must have been a creed of simpler type enjoying a bond of unity lost to the creeds descended from it. Encircling these later developments, like the embrace of the outer firmament around the visible universe, and looming persistently back of them, was the awful presence of One Supreme and Incomprehensible Divinity. As the internal evidence of these polytheisms shows a process of religious decay from unity to multiplicity, from the one to the many, so as we go back along the lines of man's religious history, we converge nearer and nearer to monotheism. To heighten the force of this we have the testimony of all polytheisms to the recognition of One Supreme Being, whose memory lingered in man's minds and made itself felt in their hearts, even when the sway of polytheism was strongest and its corruptions rankest. Moreover the history of the Jews witnesses to the perpetual presence and survival of monotheism amongst an insignificant people, when it had been lost to all other nations of the earth.

Our investigation has now reached that point where we may push our inquiries still further back and ask ourselves what could have been the religious creed which preceded this conscious sun-worship, which, as we have seen, is the root of all polytheisms? It would be in contradiction to the natural course of religious history to hold that man first paid religious veneration to lesser things and then arrived at higher by way of synthesis. He could never, as a recent theorist (Herbert Spencer) holds he did, have begun with the worship of ghosts and stocks and stones, and then risen to a conscious sun-worship. Such a supposition is entirely

gratuitous, and not only unsupported by data, but contrary to the constitution of the human mind. The most striking and conspicuous natural object would certainly be the first to claim man's religious admiration and veneration, provided no supernatural object had already engrossed his attention. That object which would seem to be most nearly related to man's life, its necessities and its happiness, that object which would be most potent for good or evil in his eyes would assuredly be the one to which he would naturally and indistinctively direct his worship. Now what object throughout all nature more brilliant, more beautiful, more majestic than the sun? What object more closely allied to man's life than the great luminary of the heavens, bringing light and heat, those vivifying principles which cause all nature to blossom and bloom, and draw forth from the bosom of the earth food for the sustenance of man and beast? What throughout all nature more beneficent and more welcome than its fructifying power? What more potent than its deadly rays in time of drought and pestilence? With the sun in the heavens in the full blaze of its glory is it possible that primitive man could have turned to the worship of lesser things, granted that he had once forgotten the One True and living God? The worship of ghosts and stocks and stones could only have developed after man had abandoned his conscious sun-worship, in later ages of religious degeneration and decay. Ghost-worship and fetichism could never have been the first but must have been the last form of man's religious veneration. So far from rendering a true account of man's primitive creed, the ghost theory describes the very reverse of the religious process as it has historically and naturally should develop. The conditions it postulates are the actual result of final decay. It paints religion at its lowest ebb, in a state nearing dissolution, not in the vigor of its beginning. Conscious sun-worship, out of which we have seen that all subsequent polytheisms developed, could not have been polytheistic in the strict sense of the word. A direct and conscious worship of the sun as highest and first divinity must have enjoyed all that visible unity which is necessarily embodied in the conception of the primacy of the solar orb in nature, and the consequent subordination of all else to it. Night and darkness, dawn and evening, moon and star, cloud and rain, storm and wind, earth, fire and water must have all been recognized as subordinate elements dependent upon the sun for their well-being, and therefore subject to it. The prevalence of this notion we have traced through all mythologies which in time pushed the parent worship from its place. In the mind of primitive man there must then have been the conception of one presiding deity above all others, ruling and directing nature in its course. When we take in evidence the terms of address employed towards

the ancient Vedic gods we find a substantial witness to this fact. "The flexible and interchangeable character of the old Vedic gods," to quote Sir George W. Cox again, "Allows them to pass without an effort from one name or thought to another. There is no rivalry between them, and no antagonism; Agni, Maruna, Indra, each is greatest; and when each is so named, the others are for the moment forgotten. Or else Indra is called Agni, and Agni Indra, each being Skhamba, the supporter of the universe."¹ Speaking of the general character of Agni, the same writer adds: "He is pre-eminently the regulator of sacrifices, and as such, answers to the Greek Hestia and the Latin Vesta. Of every one of the worshippers he is called at once father, mother, brother and son. He is Vasu, the Lord of life. He shields men from harm during life, and after death is the psychopompos or guide of souls in the unseen world. In short Agni is but the name for the one God." And again: "They call him Indra, Mitra, Maruna, Agni, that which is one; the wise call it many ways; they call it Agni, Yama, Matarisvan. But there was at the same time in India as elsewhere, the tendency to discern in each name the mark of a distinct personality, and to invent for each a distinct mythical history. This tendency especially affected the popular belief and the popular practice, and the monotheistic convictions of the sacerdotal caste were not allowed to interfere with either. Thus, because two of the flickering tongues of the black-pathed Agni were called Kali, the black, and Karati, the terrific, these became names of Dargas, the wife of Siva; and a bloody sacrificial worship was the necessary consequence."²

Professor Max Müller tells us that "ancient language is a difficult instrument to handle, particularly for religious purposes. It is impossible in human language to express abstract ideas except by metaphor, and it is not too much to say that the whole dictionary of ancient religion is made up of metaphors."³ "Place yourself," he goes on to say, "in the position of those who first are said to have worshiped the sky. We say that they worshiped the sky or that the sky was their god; and in one sense that is true, but in a sense very different from that which is usually attached to such statements. If we use god in the sense which it has now, then to say that the sky was their god is to say what is simply impossible. We might as well say that with them spirit meant nothing but air."⁴

In other words, it was only by analogy that words signifying sky were used to express primitive man's conception of God. Looking out upon nature around him, he selected, by an almost

¹ Sir G. W. Cox's *Mythology and Folk-Lore*, chapter iii.

³ M. Müller's *Science of Religion*, Lecture IV.

² *Idem*.

⁴ *Idem*.

invincible choice, the name used for its most enduring, wide-extending and majestic object wherewith to express in human speech his thought of the Eternal, Omnipresent and Omnipotent Being, who rules and governs the universe. Dyaus, the Bright-Shining-One-in-the-Heavens, or Maruna, the All-Surrounding, All-Enduring-One; or Agni, the Everywhere-Present-One, became the polynym for God.

In the course of time, when the primitive force of this conception began to recede into the distance, that tendency, which we have seen afterwards develop into the world's polytheisms, commenced its work of splitting up the unity of its first idea of one God into many. The first step was to imagine a distinct god for every analogous expression which had been applied to the one God. The polynym characteristic of the many attributes of the One thus became the fruitful source of subsequent polytheisms. Dyaus, Agni, Varuna ceased to be applied to One alone, and so grew into the appellations of many distinct deities, thus laying the foundations of all mythologies.

There is but one conclusion to which this evidence brings us. The creeds of the ancients clearly bear witness to a common element, which shows that all had taken root in the primal conception of the unity of their object of worship. Their very differences only serve to define this point as a shadow reveals more clearly the direction of the source of light which casts it. Despite, then, the differences we find in the bygone faiths of the ancient world, notwithstanding their debased and monstrous forms, we are forced to admit a common element which reposes solidly and firmly as a common foundation beneath all heterogeneous accretions. The creeds of men may have been as varied and as manifold as the shifting aspects of the clouds, errors of the grossest character may have sprung from them, they may have been the source of crimes innumerable, of sufferings untold and of the shedding of rivers of blood; yet, that unifying element, which was the only salt amidst so much corruption, endured firm and unshaken under the fiercest storms of human passion and perversion. Nations rose and fell, creeds began and decayed with them, but through all changes, all vicissitudes, this fundamental principle remained intact. Men might worship Indra and Vishnu, Jupiter and Athêne, Isis and Osiris, Ormuzd and Ahriman, Moloch and Astarte, Thor and Baldur; they might sacrifice to these false gods even to offering up human victims, yet back of all, hidden in the awful dawn of the ages, reposed the image of One Indivisible God, of whom these were but the distorted shadows projected over the world by the darkened imagination of a corrupt race. Men clung to their gods, who stood between them and the knowledge of the lost Supreme Being, at the cost of life itself, because they mistook the false for

the true. The unquenchable fire of worship in the human breast could not be extinguished, even though it burned at unhallowed altars. Man could never have come to the worship of false gods if he had not once known the true God. The esoteric meaning of Heathenism has but one lesson to teach: it was the human heart's prevailing sense of the existence of a Supreme Being imperfectly endeavoring to express its meaning through the multitudinous forms of error.

This is the clue to guide us safely through the snarl of man's religious history, and without which all is inextricable confusion. Amidst all the fluctuations of time there exists an enduring element unscathed. Decay and death might devour with capacious maw kingdoms and creeds, but the foundations upon which these latter rested remained unshaken; violence and wrath might overthrow their temples, and the fiery furnace of human passion consume their altars, but below these storms the hidden wells of truth lay in peace and quiet. Vain and fleeting as has been the life of man, putting forth its fruit to perish after a little time, beneath the swiftness of change can be seen the deep and silent ocean of his primal years resting in strength and calm. Although discord and strife seem at times to have gained the mastery over peace and love, yet even amidst the horrid clamor of contention is discernible the low, deep undertone of a divine harmony. The struggles and groans of toiling humanity, its hopes, its desperation and its degradation only bring out in stronger relief the divine tragedy of its living. The inestimable value man has placed on his ideals, the awful sense of an incalculable loss in his heart are manifest in the tireless efforts he has ever made to hold to the broken fragments of the truth he still retained, putting a price above life itself upon the fleeting images which shadowed and obscured the primal light. Not altogether vain, not wholly meaningless, have been his half-articulate clamors after truth; not wholly profitless the altars of his false gods, not absolutely evil the grossest idolatry his blinded intellect has paid to stocks and stones, for all this was but the perverted and defiled expression of his heart's aspiration towards the blurred image of Divine Beauty, which still dwelt in his soul as the ineffaceable memory of the lost Truth. Beneath the ever-shifting surface endured this immutable memory and this unconquerable aspiration, clouded and feeble, it is true; but for all that the central point of all heathen systems, around which they gravitated, and from which came all the dim light they retained to imperfectly illumine the else utter darkness—

On the glimmering limit far withdrawn
God made himself an awful rose of dawn.

CONDÉ B. PALLEN.

ANTHROPOLOGY: AN HISTORICAL SKETCH.

IN proposing to give an historical sketch of anthropology, we might almost venture to call it a biographical notice. So dear and charming is this science of theirs in the eyes of anthropologists that their rhetoric indulges in amplification and their fancy in fervid exaltation. It would appear that anthropology first broke upon their vision, clothed in its present bewitching guise, when Charles Darwin dressed the new creature in the literary garb of his book called "The Origin of Species." In its popular, fashionable attire this science is nothing else than the evolution of man as ushered into the world through Darwin's famous book. And, considering the strict kinship which Professor Huxley owns with all the ancestry, relatives and prospective posterity of evolution, our readers will not be unduly surprised at his festive vein of congratulation, in an address which he delivered on celebrating the twenty-first birthday of Darwinism. Thus he delivered himself in 1880, when speaking of Darwin's book, "The Origin of Species:"

"Only a few months," he said, "are needed to complete the full tale of twenty-one years since its birthday. Those whose memories carry them back to this time will remember that the infant was remarkably lively, and that a great number of excellent persons mistook its manifestations of a vigorous individuality for mere naughtiness; in fact, there was a pretty turmoil about its cradle. My recollections of the period are particularly vivid; for, having conceived a tender affection for a child of what appeared to me such remarkable promise, I acted for some time in the capacity of a sort of under-nurse, and thus came in for my share of the storms which threatened the very life of the young creature."¹

Somewhat less metaphorical is M. Adrien Arcelin, a distinguished Catholic scientist of the continent, while the character which he gives to the science throws into relief some traits which the other gentleman suppressed. "Anthropology," he says, "is definitely a science altogether new. Hardly in existence, its lot was cast in turmoil and notoriety. Unlike virtuous maidens, she has made people talk about her very much from her tender years. This is not surprising. More than any other, this science has boldly taken a hand in the fight which, under the impulse of conflicting philosophical notions, divides the naturalists of our day into two schools;

¹ "The Coming of Age of the Origin of Species." Address, 1880.

one of which is positive, prudent, advancing by deductions, closely adhering to facts, making progress slowly but surely ; while the other is enterprising, audacious, transgressing the limits of observation by ingenious inductions, and scrutinizing nature for the purpose of making a case of its own.”¹

Our purpose is to give a notice of this intrusive creature called Anthropology—not the prudent, cautious science which may claim descent from Linnæus, Buffon, Cuvier, but the present claimant for notoriety which is descended from Lamarck and Darwin, and has won the place it bid for by making all of us descend from the brutes.

I.

And, first, as to the name. The Greek word *anthropos* means “man.” Anthropology then is the science which has man for its subject, or, at least, undertakes to treat of man. The undertaking has been enough to confer on the Darwinian theory the dignity of being considered anthropological, though we shall have more than reason enough to see that Darwinistic science is indeed about man, but with the man left out.

Taken in its broad and proper sense, anthropology is a branch of philosophy, older than Aristotle. The study of man’s living self, always the most interesting of investigations for the human mind, was located by the Greek philosopher in his *Physics*. It was the substantial being, as visible, tangible and conscious, that was taken by him as his subject, and in this substantial being a substantial form, or soul, or *psyche* was included. Such soul was no abstraction, nor was it any unknown force ; still less was it any portion, or atoms, or molecules of that body, which it was primarily required to constitute as a body in the first instance. It was the immediate and adequate principle of all the visible and intelligible effects in that human compound, physically present to him.

The scholastic philosophers of the Catholic Church, when treating the same subject, expounded their doctrine about it under the title “*De Anima*, or the Treatise on the Soul” ; and this treatise, because it explained an ultimate constituent of a primary substance, was ranged under the dignified head of Metaphysics. Exchanging the Latin term, *De Anima*, for a Greek name, *Psychology*, which means the same thing, modern philosophers have treated the science of the soul in precisely the same way as the older Scholastics. Psychology is the science of Man, because the soul, if understood, explains all else that is in the human compound. It explains man as a vegetative or growing organism ; it

¹ *Revue des Questions Scientifiques*, 1879, tome vi., p. 413.

explains him as endowed with animal sensibilities ; it explains him as an intellectual being capable of thought.

In recent years, one or other Scholastic philosopher, like Sanseverino and Palmieri, has employed another term, *Anthropology*, or "science of man," to denote the same department of Metaphysics ; nor would the designation be incorrect if only it had prevailed. But, seeing that a singular, restricted and mutilated use of the term has now foreclosed any other employment of it, and has applied it thus narrowed down to courses of study, to books, associations and the like, it would appear as if henceforth philosophers were debarred from designating *Psychology* as *Anthropology* ; or, at least, if they did so, it should be with such an extension of their subject as would cover the main part of the now prevalent signification.

What, then, is the prevalent meaning of the term ? It is "the study of man, as a genus and species of the *animal* world, conducted with reference to no other considerations than those which would be admitted by the investigator of any *other form of animal life*." ¹ Here it is evident that, as no "other form of animal life" has a spiritual or immortal soul, or is considered to lay claim to it, no human soul need be looked for in a field of this kind,—forsooth, "among considerations that would be admitted by the investigator of any other form of animal life."

In fact, to pick up at random some illustrations of the scientific fashion in vogue, one gentleman, an anatomist of Lyons, in France, poses the very ample philosophical questions. What are we ? Whence ? Whither ? And, then, replying to them, invites his auditory to retire with him into the sacred retreat of a laboratory in the planet Saturn. There, apart from the biassing influences of passion and predilection, far removed above the clouds of such things as religion and revelation, he dissects human bodies, which, "in the name of modern anatomy," he desires to locate with scientific precision in the universe of things. And, as the final conclusion, this genuine disciple of the German, Haeckel, enunciates that "man is a vertebrate animal, of the order of primates, of the family of *hominians*, the last product of evolution, latest link in the long genealogical chain, which extends backward even to those protoplasmic masses, whereof the *Bathybius*, so minutely described by Huxley, offers us one of the best specimens." It seems to make very little difference to originality and logic of this type, that the "*Bathybius*," thus posited as representative of the original and essential link in the whole biological chain, should have been repudiated ten years earlier by its own progenitor, Huxley, as an unfortunate figment, which failed to make good the

¹ Prof. Huxley, "The Advance of Science in the Last Half-Century," 1887.

promises of its youth. But motes of that kind do not obscure the glorious vision of science down the unknown vista of unverified time. Again, a physiologist at Nancy opens his course with an erudite exposition of "nervous evolution," and succeeds in explaining thereby "the transition of the microscopic drop of protoplasm to the human brain and to—thought."¹ All this, and a thousand other such doctrinal statements in every line of science and study, indicate with sufficient clearness what is taken to be the scope of Anthropology, and how many other sciences may be impressed into its service. It is the great "Philosophy" of the latter half of the nineteenth century.

To make the matter clearer still and put it in a categorical shape, we shall give here the very satisfactory account of Professor Otis T. Mason, incorporated in the Smithsonian Report on the Progress of Anthropology, 1890. He says: "A complete syllabus of anthropology would include—first, what man is, and second, what man does." This division of the science about man is complete, supposing that the first member, "What man is," includes the question, whence he comes, and that the other member, "What he does," includes whither he goes. Thus taken, and it is the sense of the syllabus which follows, anthropology is seen to be adequately commensurate with all philosophy, and more. The form of the division is quite scholastic in its neatness; a philosopher might have used the words, *esse et operari*; *esse et agere*; *quatenus homo est, et quatenus causa est*.

Now these two members of the division the writer denotes by suitable appellations: "What man is, may be denominated *structural anthropology*; what man does, *functional anthropology*." This nomenclature is unfortunate from a logical point of view; for the terms, as derived from common usage, are altogether inadequate to cover the range of ideas conveyed. Structure is an attribute of the organized body only; function, an exercise of merely organic activity; one anatomical, the other, physiological. This is all that the terms denote; and it is all the writer means in fact.

However, if the meaning and terms alike are inadequate to express the range of the science,—“What man is and does,”—they are perfectly adapted to determine the range of vision within which scientists confine themselves and limit their view of anthropology. The syllabus that follows gives absolutely no place to the essence of man; and it omits accordingly the highest faculties of man, intellect and will. Nor does it omit them merely; it conveys a denial of them; since the names of the sciences which should denote them are studiously diverted to senses that com-

¹ Cf. *Revue des Questions Scientifiques*, tome xxv., 1889, p. 358.

pletely ignore them. The names of Religion, Philosophy, Sociology, Æsthetics, are dragged down to express phenomena of matter and force. Thus the report reads:¹

Phenomena.	Science.
All mankind as natural objects,	Anthropology.

What Man Is—Structural Anthropology.

The embryo of mankind and life of the individual,	Ontogeny.
The body of man (specific and comparative),	Anatomy.
The functions of the body,	Physiology.
Form and color, weight and number,	Anthropometry.
The nervous system in relation to thought,	Psycho-physics.
Natural divisions of mankind,	Ethnology.

What Man Does—Functional Anthropology.

To express his thoughts,	Glossology.
To supply his wants,	Technology.
To gratify his desires,	Æsthetics.
To account for phenomena,	Science and philosophy.
To co-operate in the activities and ends of life,	Sociology.
In presence of a spirit world,	The science of religion.

The Past of Human Life and Actions is Studied—

(1) In things decayed or dug from the earth,	Archæology.
(2) In the decipherment of inscriptions,	Palæography.
(3) In the acts and sayings of the unlettered,	Folk-Lore.
(4) In written records,	History.

Sciences Helpful to Anthropology.

To determine the material of art-products,	Mineralogy.
To fix the age of relics,	Geology.
In studying the mutual effects of man and the earth on each other,	Geography.
To determine man's place in nature and his acquaintance therewith,	Botany and zoology.

Such then is the new science of anthropology; such the meaning made perforce to underlie the name. It includes philosophy, ethics and religion, without giving us a fragment of any. On the lines thus marked out, we may count in any current year at present as many as 1300 works published, of all sizes and in all languages.

¹ Smithsonian Report, 1890; "Progress of Anthropology in 1890," p. 528.

II.

The gross results of the pursuit, as thus conducted, are precisely those, which, looked at prospectively by Charles Darwin and his supporters, moved him to originate it, and impelled them to forward it. Darwin's school have attained by means of this scientific fashion the end to which they aspired; and he himself lived to see the purpose of their existence fulfilled. That is summed up in the word, Evolution, or the development of all living things from matter. Everywhere in the phenomena of nature, man included, this science finds matter. Matter makes up man, it makes up the lowest rudimentary life, it constitutes the inorganic world which has no life, away to the stars and beyond; and it was before the stars were. It is all matter, arranged diversely everywhere. Regarding man in particular, as compared with the animal life beneath him, the statement is peremptorily made: "The ingredients being the same, the difference must lie in the mixing."¹ Man is mixed just a little differently from the primeval living "moneron," and, in turn, that protoplasmic speck is mixed a little differently from the gas in the sun and stars.

The line of development from one extreme to the other is traced with all that devotional fervor, which throws a glow about the shrine and the ceremonies of a new cult. We are served with categories of cosmic evolution, covering inanimate nature, and of biological evolution, comprising all life, vegetative and animal. There, where the lower animal is seen to approach man, we are addressed by the eloquent menagerie of the monkeys. Monkey to monkey is seen passing on the spark of life, till man gets it, and he is. In him, no exhibition of vitality is exempt from the filiation, no function, however noble, no faculties however delicate. His most refined emotions are surely analyzed with the most delicate consideration, when a lady takes the scalpel; and thus Madame Royer delivers the judgment: "*L'ânesse doit certainement trouver du charme au braiement de l'âne.*"² The make-up of the protoplasm in the ass is a mill that turns out one sort of grain; that in a man turns out another; we call the product differently, a donkey's emotional bray or a man's sentimental compliment; but the mill is the same.³

There were evolutionists before Darwin, even in the sphere of biology, where his lucubrations and conclusions came to rule su-

¹ Edward Clodd, *The Story of Creation; a Plain Account of Evolution*, ch. 7, The Origin of Life.

² *Revue des Questions Scientifiques*, xxv., p. 364.

³ We have given illustrations of this side of the subject in an article on "A Baby's Footprint and Other Vestiges"; AMERICAN CATHOLIC QUARTERLY REVIEW, January, 1893, pp. 19-41. Hence we need not pause to give further illustrations here.

preme. But his precursors, Erasmus Darwin, Lamarck, Robert Chambers, while exciting much comment, and arresting even scientific attention, struck no deep root in the scientific mind; although, as is usual in all revolutionary movements and agitations, progress was steadily made. There have never been wanting men who wanted no God; men with whom theology denotes merely, as Edward Clodd seriously puts it, "Man's relations to the god or gods in whom he believes."¹ And it does not require much anatomical dissection of a godless subject to find out, that a godlike thought wandering over its features is a false light for seeing it to advantage. The scientific mind, in fact, seems to resent the light and thought of God as an intrusion on its individuality, and an interference with its well-being. Either ignorantly, or maliciously, it travesties the idea of a Creator, as that of an agency applying every creature to its work, and leaving it nothing to do of itself. This supposition is a gross one; yet it is universal in all the presentations of science. It is gross, for the most elementary idea of God, as Creator and Provident Governor of the universe, conceives of Him, as making things to be, and making them causes likewise, competent to act in their own sphere. It is only where they are incompetent to act, that He acts directly, as in the creation of a spiritual soul. It is only for special and exceptional purposes that He ever chooses to override them, as in the operation of a miracle.

To the liberal demands of science in behalf of atheism, correspond its intolerant requisitions made of "the orthodox." If we, "the orthodox," will not give up Genesis, it requires of us that we "understand" Genesis; and we are sure to find that, "understanding" Genesis, we shall be at liberty to grant any "conclusion," which "a just study" of science requires. Wherein the audacity of this intellectual revolution tallies perfectly with the device, *De L' audace! et encore de l' audace!* of the great social revolution, which since the end of last century has set everything adrift. Then good people said: Give in a little for the sake of peace! And good people now say: Pare down a little; peace for Genesis at any price! "Understand" it; you'll find it agrees.

But, first, let us understand what the just study of Darwin led him to. He observed with great minuteness, what every one knows in general, that there is a tendency in plants and animals to change, to modify their structures, functions and form, according as change of environment, or other cause, operates upon them. Hence come the varieties and races, in vegetable and animal life. Again, in reproducing their kind, they tend to multiply their stock

¹ *Story of Creation*, ch. xi., §5, *Evolution of Theology*.

in what is called a geometrical ratio of increase ; so that any species of the lower organic world, if left to itself, would seem to be capable of rapidly occupying the ground, the air or the waters, and eating up all the sustenance, which is provided for many kinds. This view of the geometrical ratio of increase, as affecting the propagation of the human race, had already suggested a false theory to Malthus, in the question of population and political economy. Since, in the ordinary course of nature, only a due proportion of each kind survives, Darwin considered that some discrimination was practised by nature. He took it, that the best survive, and that nature selects the best. Hence this discrimination he spoke of as "natural selection"—a word, which has caused his school infinite trouble ; for neither does his theory of fortuitous adaptation to environment allow of any provident "selective" principle, nor do the facts warrant any such element as a positive selection in nature. There is in general but a residue left by mutually counteracting and compensating agencies ; there is a resultant remnant only. However that be, Darwin inferred that the best, for the time being, survive ; they become ever better and better, by some fortuitous process ; until they may at last become the best absolutely. Now, besides all this, it is certain that great geological changes have taken place in the conditions of this earth ; and these changes he could pleasantly invoke to account for any other unknown alterations in organic life ; he could charge geology with having effaced the records of what, according to him, ought to have been. Hence, by a genuine Darwinian process of logic, his "conclusion" stood forth, that species, as we see them, originated in lower species. This is the whole argument of the famous book, "The Origin of Species."

Darwin did not argue much. He was not capable of it. He clubbed facts together, as the Hebrews clubbed words, and left you to understand that one is a nominative and the other a genitive ; or as men in the ordinary affairs of life associate notions together, without committing themselves to affirming what they mean ; and what they mean is clear, yet they are not indictable for libel.

Men were just prepared for such a thesis, if presented cleverly. They should have preferred it to be clearer ; but, what he left unsaid at first, they said clearly enough for him, and with audacity. War was declared, in the name of accurate science, against all Scripture, theology, and every sound science that was. He and they became famous, and the vast, all-reaching science of Anthropology, like the goddess of reason half a century before, was seated on the altar ; while the proletariat that hangs on to it looks round to examine the foundations of the throne, and sap the sub-structure of society.

As to the scientific merits of Darwin's thesis, we may remark that not a single one of the ideas put forward by him remains to-day as he put it forward. All subscribe to the substantial fallacy of the system, that of ignoring specific distinctions, or impassable barriers between true species; they fly for refuge to the "unknown," to what "may have taken place," though to do so they have to fly in the face of their own pet principle of uniformity in nature's laws, of a continuity, a permanence of the same laws and the same course of nature, which we witness about us, and which affirm impassable barriers, dividing one species from another. But beyond this fundamental article of agreement, in ignoring specific distinctions and affirming the possible transmutation of species, a tenet on which every evolutionary theory must stand, if it is to stand at all—the Darwinian theory that was coincides exactly with no evolutionary theory that now is. Selection, survival, heredity, the effects of use and non-use—all the Darwinian landmarks have shifted; and there is a process of disintegration going on, which gives infinite occupation to his followers; and this is the occupation which makes firm the reign of evolution on the scientific mind. It is like the reign of Protestantism, which during four centuries, has maintained itself by breaking up, and now reaches its term, when the gaseous elements are already evolved into the thinner air, and the impalpable residue furnishes nothing more to break up.

In a word then, the momentous epoch of Darwinian illumination was very much like other momentous epochs; things came about so, because they were wanted. A due "period of incubation," if we may borrow a phrase of Mr. Grant Allen's, had gone before, and Darwinism was the product. If one man had not signaled that date with such a deed, some one else would have done it, and only the name of the thing would have been different. It is the one who is bold to do the deed, or to suffer the illusion in a striking way—*agere et pati fortia*—that centres universal attention on himself. He fixes the rallying point, establishes the base of operations, and gains the immortal glory which we find attaching to some names in old almanacs, or to some skulls in a military museum: "N. N., 1859, the first person seized with the epidemic visitation of this year, from whom it spread with marvellous rapidity through the whole population"; or, "The perforated skull of N. N., who was the first person shot in the great battle of Y——, wherein 10,500 bit the dust."

III.

Geology, moving on parallel lines with Darwin's biological investigations, deserves a very special notice. The hero of "The Antiquity of Man," Sir Charles Lyell, serves as a pathetic instance of

how the new creed broke down the barriers of religious sentiment and belief, even while he himself regretted the subjective change of which he was conscious. By his thesis of a very remote geological antiquity, as regards both world and man, he contributed the most material reinforcement to Darwin's conception of the slow and fortuitous transformation of species from one brute form to another. Yet he fought against this doctrine when applied to the brute as evolving into man. At length, with reluctance, he gave in, and, writing to Sir Joseph Hooker, referred to his subjective difficulties in these terms: "I plead guilty to going farther in my reasoning towards transformation than in my sentiments and imagination, and perhaps for that very reason I shall lead more people on to Darwin and you than one who, being born later like Lubbock, has comparatively little to abandon of old and long-cherished ideas, which constituted the charm to me of the theoretical part of the science in my earlier days." And to Darwin himself he writes regretfully: "The descent of man from the brutes takes away much of the charm from my speculations on the past relating to such matters."¹ That allusion to the young is significant. Never was it more true that "the world was to the young." For just then, in England, the young generation of scientific men, unlike the age of Newton and others later still, was remarkably free from the notion of God and disembarassed of all reverence for Him; and an evolutionary theory was felt to be ethically convenient, as it always is to be "without God in the world," *sine Deo in hoc mundo*.

But, however a "conclusion" might grate on Lyell's religious sentiment, his contribution towards the structure of an argument was noteworthy. His was the theory of uniformitarianism. It may be spoken of as belonging to a date gone by, for science has been rude in the handling of it.

In its broadest field, wider than Lyell's special study of geology, the theory posits the maxim that there has never been any change whatever in the action of causes that operate in the universe; that what is going on now has always been going on by the same causes and in the same manner as now. So much is the present the result of the past, that in the present course of nature you see the entire series of processes in the past; and without a break in the continuity or uniformity you may go back and reach the beginning of things, and explain the very genesis of the universe. In this widest, crudest form it disposes of the first beginning of nature by supposing that things began in the same way as we see them continue. Matter and force, somehow disposed the right way, grow up to be a pony, and a pony grows up to be a horse. Well, but how did the matter and force come to be? Why, they—grew!

¹ Grant Allen, *Charles Darwin*, etc., No. 128.

Uniformitarianism in geology was the special thesis of Sir Charles Lyell. He published his "Principles of Geology" in 1830, and he laid emphasis upon the fact that natural causes, now at work and at the same rate at which they now work, are competent to account for the phenomena which have occurred in the gradual deposition of the stratified rocks. But his love of uniformity led him into computations of years and periods, which, as bearing on the age of the human race, have been subjected to rectifications on all sides; and school-boys now can cite facts from their books, and refer to phenomena in the rivers, lakes, and mountains, which assail the principle of uniformity and dismantle Lyell's conclusions. The manner in which he served the interests of the evolution of species, yet to be propounded by Darwin, is thus explained by Professor Huxley: "The publication of 'The Principles of Geology,' in 1830, constituted an epoch in geological science. But it also constituted an epoch in the modern history of the doctrines of evolution by raising in the mind of every intelligent reader this question: If natural causation is competent to account for the not-living part of our globe, why should it not account for the living part?"¹ That is excellently stated, to the credit of both the professor and the "intelligent readers" he speaks of. For it means: If the natural causation of brute forces is competent to account for the deposition of brute, inanimate matter in the form of sedimentary rocks, why should not the same causation of brute forces account for the organization of living matter which is not brute, inanimate rock? To which the evident answer is: Why should it?

This was beside the geological question, which concerns only the antiquity of the earth, but which moved on, with the help of archæology, to the antiquity of man. Bone-caves and the industrial remains of ancient races were found by antiquaries, and these, with the relics of extinct animals, like the mammoth and the cave-bear, were referred to the date of certain geological deposits, which, on the theory of uniformity, must be very old indeed. Hence, instead of dating man's origin back a mere trifle of six thousand years or so, it was necessary to rectify the tables, and so his origin was relegated to the trifling distance beyond of one or two hundreds of thousands of years. And thus, three years after Darwin's "Origin of Species," Lyell's new book, "The Antiquity of Man," came to supply a kind of historical background to the eternally slow, infinitesimal changes, which the evolution of animal life required, on the basis of natural selection.

Now, geology is very like Assyriology, Egyptology, and other advancing sciences, which deal largely with the mythical. Thus

¹ *The Advance of Science in the Last Half-Century.*

far, the interpretation depends very much on the bent of the interpreter's mind. And there is a fair field for genius. Again, they resemble one another in the family trait of uniformitarianism, which means that there has been the strictest consistency up to this in saying and unsaying the same thing, in positing "conclusions" and then gainsaying them, and on the wreck of their former selves mounting up to higher things. But, till they are fairly mounted, any one who desires to establish a thesis of his own has only to make a selection of those authorities that make for him, and to omit the rest. The authority of what so-and-so says, or what so-and-so thinks, is the stock in trade of the whole logical process. One most eminent orientalist has "inferred," another profound Egyptologist has "concluded," the first of geologists has even "suggested"; and lo! scientific logic has clinched the argument.

Geology, in relation to history, knows only one thing; and that is the *relative age* of one deposit compared with another; from which anthropologically there issues one scientific conclusion, and no more than one. It is that, if man lived contemporaneously with the deposition of a given stratum, he was as old as that deposit, neither older nor younger according to the testimony of that layer; he was younger than an older one, older than a younger one. To this degree of profundity can the geological argument reach. Beyond that, geology has not reached; it does not perforate the thinnest crust of the question.

Is there no determining the *absolute* historic date, at which that deposit was laid? Uniformity in the rate of deposition will not do it; that assumption taken baldly would be a gratuitous postulate. Perhaps with the help of other sciences a date may be extracted? So it may. What are those helpful handmaids to this noble chronicler of "secular changes?" They are only the following, and all of them must work together: astronomy, meteorology, geography, natural physics, terrestrial physics, chemistry, botany, zoology, physiology, comparative anatomy, mineralogy, and perhaps one or two more, such as documentary history. When all these work together, it is not geology that is operating in its own field, but it is a general co-operative agency that is pulling at the quasi-philosophical tenet of evolution. The one special good turn they do to the geological stratum, is that they may enable the relative date of a certain deposit to be transmuted into an historic date—so many thousands of years ago. This co-operative agency of all sciences, required for the thesis of evolution, makes of Darwinism a universal science of induction, which, to establish anything, must base itself on all orders of facts, and on all the laws which reveal themselves in the boundless field of

nature. When it shall have accomplished this gigantic feat, we are credibly informed that the result will be found to accord with Genesis, the one reliable historic monument in the world. If so, we are content in the meantime to keep the sacred record entire and intact; and we are thankful to science for its ultimate intentions, in the secular changes of its transmutations.

And we say besides: Give us premises, not "conclusions." Any child or dolt can draw conclusions when the premises are clear. But the fashion is to begin at the wrong end, and flourish the conclusions without scientific premises. Again, we say, present a scientific set of premises which show that the record of our race, as presented in Genesis, should be extended backwards, say only 2000 years. We affirm that the same premises, with a slight modification, will prove the record deficient by 10,000 years. You demur to this and repudiate and refute it—to save Genesis from an error of 10,000. We will take your identical refutation, and rescue the sacred record from your error of 2000 years.

IV.

The elder Agassiz would never admit the evolutionary theory; yet he rendered the new doctrine a service, which has enabled the fertile imaginings of Ernst Haeckel to build up almost a new science. He noted with accuracy the progressive advance in organization, which characterizes the various species occupying the earth at successive geological epochs; and, in this organic improvement, he discerned an analogy between the different steps of the progression and the different stages, by which an embryo develops to the adult condition in the higher specific organized forms. "In fact," observes Professor Huxley, "in endeavoring to support these views he went a good way beyond the limits of any cautious interpretation of the facts then known."¹ As to the theory of Haeckel, founded on this, we gave a specimen from the pages of G. Romanes's "Mental Evolution in Man," *AMERICAN CATHOLIC QUARTERLY*, January, 1893, p. 23-24. On this basis of mere analogy, a subject worthy of a poet's pen, Haeckel has constructed a stupendous theory called "Ontogeny and Phylogeny"; as if every embryo were a kind of secret cipher, revealing to those who know how to read, the past history of all the ancestral races, which were the grandfathers and great-great-grandfathers of the race to which it belonged, back to primeval protoplasm. A fair example this, of how men jump at "conclusions" first, and build sciences out of them, before the premises have been proved!

Zoology and botany, or the sciences which deal with the laws

¹ *The Advance of Science.*

of living beings in the animal and vegetable kingdoms, though not brought into line with Lamarck's materialistic conception of the development of species, were being highly elaborated. And this was the field, as on his own proper ground, where Darwin broached the great theory of man's evolution from the brute. It was the field of biology; and here, we say, he was on a vantage-ground.

Biology, or the general science of life, led of its own nature to human life. It was made to include human life; so that biology should include psychology. And anthropology, which, as we noted before, might with propriety be taken as another word for psychology properly understood, is now taken to signify psychology as swamped in materialistic biology. Man, however degraded in conception, is still the centre of the visible universe. And so anthropology is the centre towards which every science converges; it is the term of every evolutionary theory; it leaves nothing beyond itself to desire; if even a deity is wanted by any one, man evolved can evolve his own deity. Thus the "evolution of theology" figures in an obscure part of the theory, and seems to be thrown in just for the sake of erudition. Theology signifies, as we heard Prof. Otis Mason tell us, the mental attitude that man chooses to assume "in presence of a spirit world," in which he chooses to believe.

This little theological by-play was the cause of all the sensation that made Charles Darwin famous. He touched a chord in the Christian sentiment of the multitude. Even if ecclesiastical forces had not come out in array against him, the sentiment of the multitude would have vibrated all the same. This was the secret of his notoriety, and, owing in part to his notoriety, of his success. And, to bring out this bearing of his theory, we cannot do better than quote verbatim the words of an excessively enthusiastic admirer of the founder of modern materialism. Mr. Grant Allen, in his work, "Charles Darwin; His Life and Work," expresses himself thus:¹

"It was possible to accept cosmical evolution and solar evolution and planetary evolution without at the same time accepting evolution in the restricted sphere of life and mind. But it was impossible to accept evolution in biology without at the same time extending its application to psychology, to the social organism, to language, to ethics, to all the thousand and one varied interests of human life and development. Now most people are little interested by speculations and hypotheses as to the origin of the milky way or the belt of Orion, . . . but they understand and begin to be touched, the moment you come to the practical questions of man's origin,

¹ Chap. xi., p. 191.

nature and destiny. Darwinism compelled their attention by its immediate connection with their own race; and the proof of this truth is amply shown by the mere fact, that out of all the immense variety of Charles Darwin's theories and ideas, the solitary one which alone has succeeded in attaching to itself the public interest and public ridicule is the theory of man's ultimate descent from a monkey-like ancestor. Popular instinct, here as elsewhere profoundly true at core in the midst of all its superficial foolishness, has rightly hit upon the central element in the Darwinian conception, which more than any other has caused its fruitful and wonderful expansion through every fertile field of human inquiry."

Profoundly true was the popular Christian instinct; and true the anti-Christian instinct. All the lame theorizers of half a century had been moving on with a halt in their gait, from whatever starting point they came; and, when Darwin came walking straight to the land of promise, the sensation was superlative and the glory immense. Personally, he held back at first from stating quite clearly what he meant, because of his wonderful gentleness, his meekness, his respect for established beliefs, and we know not what other saintly and divine attributes, which made him the adorable creature he was. But others who took up the word, men like Vogt and Huxley, rang it forth with an arrogance and impudence not to be mistaken. Three years after the publication of "The Origin of Species," appeared Professor Huxley's "Man's Place in Nature." In this work the professor, not pretending to prove his point that man has come from the monkey, indicated the "evidence" that bore upon it. His frontispiece exhibited the famous series of apes, all in a row—the gibbon, orang, chimpanzee, gorilla, man. In the book he made the proper reservations, as became a rigidly scientific man; but the picture contains no reservations; and it is now part of the stock in trade of every scientific work and review, of every large dictionary and even of text-books in the public schools. It cannot complain of not being seen to advantage; for it requires only the "wet light" of passion and sensuality, which is sufficiently diffused among mankind, to throw about the picture a proper atmosphere as of an evening mist; the "dry light" of calm reason is reserved for the reservations. And after this, when Mr. Darwin so far overcame his superhuman gentleness as to publish his "Descent of Man," he said nothing which had not already become familiar to the world, through the energetic propagandism of his lieutenants.

As to his own deeper sentiments in this line, we are not left in doubt; and this leads us to the philosophy, metaphysical and religious, which underlies the whole revolution. It is always the action of philosophy, or the reign of ultimate ideas in men's

minds, that controls the course of events with far more power than the agitation of politics or the marching of armies; for armies and politics are themselves moved by the motives of final causes and the conception of first principles.

Darwin tells us that "man may be excused for feeling some pride at having risen, though not through his own exertions, to the very summit of the organic scale; and the fact of his having thus risen, instead of being aboriginally placed there, may give him hope for a still higher destiny in the distant future." This is nobly said; and let no obscurantist profane the dignity of such a sentiment with a vulgar thought—like that intolerable Dean Swift, who said with his usual bad taste that "the top felicity of mankind is to imitate monkeys and birds; witness harlequins, scaramouches and masqueraders; on the other hand, monkeys, when they would look extremely silly, endeavor to bring themselves down to mankind."

Profane! Let us return to Darwin and his contemplations of destiny and creation, of a first beginning and a last end. He uses the word "Creator." Thus, in the last sentence of his "Origin of Species," written at a time when his respect for established beliefs did not allow him as yet to say anything offensive, he delivers himself of this thought: "There is grandeur in this view of life, with its several powers having been originally breathed by the Creator into a few forms or into one." The simple Christian reader might incautiously infer from these words, that biological evolution in the mind of its evangelist was compatible with the truth of creation. No such thing! Writing to his friend, Sir Joseph Hooker, in 1863, the gentle critic says: "I have long regretted that I truckled to public opinion, and used the Pentateuchal term of creation, by which I really meant 'appeared' by some wholly unknown process." And, in 1879, he writes to a German student that "the theory of evolution is quite compatible with a belief in God"; but you must remember that different persons have different definitions of what they mean by God.¹

So the popular instinct had not been mistaken. Catholics, in particular, need not be mistaken as to their own home interests in the question of evolution and in the minds of evolutionists. Thus in an article, "Mr. Darwin's Critics," Mr. Huxley writes: "In addition to the truth of evolution—indeed, one of its greatest merits in my eyes—is the fact that it occupies a position of complete and irreconcilable antagonism to that vigorous and consistent enemy of the highest intellectual, moral, and scientific life of mankind—the Catholic Church."² Well said, indeed, by a man who, when

¹ Edwin Walmesley in the *Month*, vol. lxii., 1888, p. 386.

² Walmesley, *ibid.*

occupying a place in the municipal government of London, was a vigorous and consistent enemy of the poor Irish Catholic children in the English metropolis—an admirable specimen of the liberal mind, nicely compounded of arrogant bigotry, tyrannical infidelity and, meanwhile, all honey, and sugar, and compliments for the members of the *coterie*!

Thus then, by a new route, we arrive at another definition of anthropology, and, besides, a personal analysis of anthropologists. We define it thus: "The science about man's place in nature." This definition we take to be perfect in its generic note and specific difference. But every word needs an explanation.

We call it a science by courtesy, for it is no science at all. It leaves out all ultimate causes and refers to no higher science for what itself leaves out. It merely posits the "unknown" all round about; and the unknown is the light in which everything is to be clearly seen. It is, therefore, properly a craft for managing something.

That something is "man's place in nature." The craft has nothing to do with man, for it leaves out his essence, his soul, intellect, will; it busies itself only with the place that man shall occupy.

The place is that which he shall occupy in nature. But it is not universal nature that is in question, for God is left out. Nor is it universal created nature, for, like man's spiritual essence, so all angelic essence is left out. Nor is it universal material nature, for the essences of all things are left out; they are bundled up in the "unknowable," or, which comes to the very same thing, they are called "atoms," "molecules." The nature that is in question is the visible order of things tangible, measurable, ponderable, subject to chemical analysis or nervous impulses; it is nature geographical, geological, technical. And, lest the reader, having too sound a mind to take easily any man's *on-dit*, should suspect us of maligning the advanced mind and its lofty aspirations, we challenge him to visit one of the "advanced" institutions of the day, and ask to see the "psychometric" and other such devices for measuring thought and soul, and, when he has understood them, he will acquit us of exaggeration. Anthropology then, or the science about man's place in nature, is the craft for sinking a human being over head and ears in brute matter.

From the elements already given, we proceed to formulate a similar definition of the men who are adepts in this anthropological craft. The definition has already been formed,—*præformata*, as they say in theology,—and we cannot do better than repeat it exactly. They are then men "without Christ, being aliens from the conversation of Israel, and strangers to the testaments, having

no hope of the promise, and without God in the world.”¹ The original Greek word, which is translated “without God,” is *ἀθεός*, *atheí*, whence we take the word “atheists.” And, since God is deposed, of course man is neither the end nor glory of this material universe; he is a mite upon this little globe; there is a plurality of worlds, and those big stars beyond have their own little mites and groveling parasites—all unknown. Let us listen to an evangelist:

“The general acceptance of Darwin’s theory, which we may watch progressing around us every minute to-day, implies a complete *bouleversement* of anthropocentric ideas [*i.e.*, of Christian and rational ideas, which make man the centre and end of this world], a total change in our human conception of our own relations to the world and the universe, which must work out for ever increasingly wide-reaching and complex effects in all our dealings with one another and with the environment at large. There is no department of human thought and human action, which evolutionism leaves exactly where it stood before the advent of the Darwinian conception.”²

Candidly, we do not think that this is an extravagant boast for the enthusiasts to indulge in. They have met with remarkable success in shutting off the light from God, the soul, immortality and morality. No wonder the popular instinct felt there was a scandal somewhere, and the popular passions came under the spell of a powerful charm. Darwin himself was surprised at his success; but that was only because the hidden charms of his theory were not new to himself. Carlyle tells us that unbelief had got into the Darwin blood, grandfather, father and son all being atheists.

V.

A philosopher was called for, and there he was—at the call—a born metaphysician. Herbert Spencer had already been elaborating his “Synthetic Philosophy” when Darwin came forward in the biological field with his “Origin of Species.” Spencer was perfectly worthy of his profession as an English philosopher. In positive qualities and negative alike he was and is thoroughly English. The positive excellence of the English mind is to be practical, to deal with facts, and always to apply the “rule of thumb.” In this respect Mr. Spencer does not fall behind the average of his race; his pages bristle with facts. The negative eminence of his mind is to have an inborn aversion for putting a paragraph into the form of a philosophical thesis, or thinking out a page by

¹ Ephesians, ii., 12.

² Grant Allen, *Charles Darwin*, etc., ch. xii., n. 198.

logical steps; and in this respect Spencer distinguishes himself in biology. In this field he is as genuine an Englishman as Darwin himself—a strong comparison! Philosophy and logic were Spencer's profession, and the results of other men's observations raked in and heaped up immoderately furnished him with the materials. Observation, on the other hand, was Darwin's profession, and logic was a sort of gum or solder with which he pieced his facts into a pattern. If we were to strain a little the meaning of terms, we might say, with Grant Allen that Darwin practised inductive logic, aiming at large principles out of small facts; and Spencer practised deductive logic, which argues downwards from large principles to particular conclusions. This gives us occasion to tell a little story, on the authority of Dr. G. Romanes, who was a kind of Boswell to the great observer, Darwin, and is, of course, bound by the courtesy of the profession to the metaphysician, Spencer. In a review of Mr. Allen's "Charles Darwin," Mr. Romanes says:

"Mr. Allen, we think, is too fond of comparing the work of Darwin and Spencer, and when doing so appears to attach an altogether undue merit to what he calls the 'deductive' as distinguished from the 'inductive' method. The work of these two great Englishmen is so unlike that, even though it has been expended on the same subject-matter, it always seems to us a great mistake to compare them; we might almost as well seek to compare the work of a historian with that of a poet. 'What an extraordinary wealth of thought that man has!' was observed to the present writer by Mr. Darwin; "when I first read his (Mr. Spencer's) 'Principles of Biology' I was speechless with admiration; but, on reading it again, I felt in almost every chapter: why, there is here at least ten years' work for verification!' Now, (continues Mr. Romanes), this is surely a sound judgment, and one, moreover, in no way disparaging to the genius of Mr. Spencer."¹

No, of course not! We should not consider the charge of perpetrating true poetry to be a disparagement to any man's genius. In fact, it is a special genius of its own. And it is certainly Mr. Spencer's glory in his attempts at philosophy.

And, as there is no place for a disparaging comparison between Darwin and Spencer, so neither should there be any invidious comparison between Mr. Romanes' view on induction and Mr. Grant Allen's equally profound views on deduction. As every one knows, deduction is the logical process by which we argue from known premises to hitherto unknown conclusions; while induction is a preparatory performance whereby, in questions of physical law and phenomena, we gather particular facts into an ex-

¹ *Nature*, vol. xxxiii., 1885, p. 147.

haustive general law; and that law, once rightly inferred, can then pose as the ascertained premise for a deductive argument. Two gentlemen who uphold the respective merits of these essential mental processes need never be considered to disparage one another.

Accordingly, Mr. Allen is right, if, when extolling deduction, he means to restore reason to a right use of its powers in the field of evolution. Deduction has felt it, for instance, like a kind of paralytic stroke to have the "unknown" postulated and posited as the universal premise of all philosophy, or as a premise to any argumentation under the sun, except among fools or children. Deduction rebels against names being used as a blind to logic, or against terms being silently assumed to cover contraband assumptions that have never been proved, as when "simian characters," "acquired" human characteristics, and other such phrases by the score, are made to stand for a proof that human characters are simian, or that they have been acquired. Yet this is all the demonstration to be found in entire books, or entire departments of recent scientific thought.

On the other hand, who will dare to slight induction? Is it not the gift of "practical scent" that leads a discoverer or an inventor like a faithful terrier to his quarry? Both of the gentlemen before us admit the superior inductive cast of the English intelligence. Mr. Allen apologizes for it: "The English intelligence in particular shows itself, as a rule, congenitally incapable of appreciating the superior logical certitude of the deductive method. Englishmen will not even believe that the square on the hypotenuse is equal to the squares on the containing sides until they have measured and weighed, as well as they are able by rude experimental devices, a few selected pieces of rudely shaped rectangular paper." Mr. Romanes glories in it: "If any one truth more than another is necessarily and forcibly brought home to the intelligence of a biologist—be he 'English' or otherwise—it is the truth that in his science it is safer to cut out his materials in the way of experiment than it is to build up his propositions in the way of deduction. Therefore, it is not without good reason that a proved 'soundness' in this way of inductive research should be regarded as the best title to a place among men of science as distinguished from men of letters. And," continues Mr. Romanes with emphatic devotion, "long may it continue to be so!"

There is no fear but his devout aspiration will be heard. It is all "soundness"; the whole science is "sound" all through; sound pieces of flesh, sound bones, sound old skulls, for which, not excluding living skulls, and brains, and intellects, and souls, the advanced German thinkers send over metric devices—anthro-

pometric, craniometric, psychometric—to measure and to weigh all human relics, lives, sentiment and intelligence. The *mens sana in corpore sano* has now a new meaning; it signifies a sound mind, good and solid, in a sound body, made plump and comfortable by hygiene and no care for eternity. This is the class of men whom St. Bernardine of Sienna (if we mistake not) pictured graphically when he said, alluding to a certain domestic animal to be found in most people's houses: "You might offer him the post of king or emperor; he would still prefer his bone!"

In brief, the philosophy invested in the whole theory is that of a concept framed to suit the aspirations of a mind materialized. Observe, it is only a concept, and therefore needs no premises; just as if a dog wants a bone, he calls for no premises to introduce it. Says the eulogist of Darwin: "Evolutionism, as now commonly understood, may be fairly regarded as a mode of envisaging to ourselves the history of the universe, a tendency or frame of mind, a temperament, one might almost say, or habit of thought, rather than a definite creed or body of dogmas. The evolutionist looks out upon the cosmos as a continuous process unfolding itself in regular order in obedience to definite natural laws." And speaking of the fight with theologians, the same writer tells us how a "concept" swept the enemy from the field: "The 'argument from design' had been immemorially regarded as the principal buttress of orthodox thought [to prove the existence of God]. Theologians had unwisely staked their all upon the teleological dogma, and could ill afford to retire without a blow from that tenaciously defended buttress of their main position. Hence, the evolutionary *concept* had its hardest fight to wage over the biological field; and when that field was once fairly won it had little more to fear from banded preconceptions and established prejudices in any other portion of the wide territory it claimed for its own."¹

One might ask whether, now that science feared neither God nor men, neither theology nor philosophy, it had not reason to fear itself and its own sound facts? Rudolph Virchow, whose authority is unimpeachable in the school, will tell us: "Let me remind you at this point that natural science, as long as it remains such, works only with existing objects; a hypothesis may be discussed, but its significance can only be established by producing actual proofs in its favor, either by experiments or direct observation. This Darwinism has not succeeded in doing." Later on, in the same address, he continues: "Twenty years ago, many things were supposed to be known when people were really ignorant of them. We have made this supposed knowledge the object

¹ Grant Allen, *Charles Darwin*, nn. 180, 190.

of scientific tests, and natural science has now really taken possession of its wide domain; and we can say that much of what was formerly asserted as true is no longer admissible. It was supposed by faith, but it never belonged to science."¹

If we take an eminent French anthropologist, we find the same ominous cloud overhanging the bright prospects of the Darwinian theory, which opened its eyes (dear creature!) some thirty-four years ago, to the mists and exhalations of so auspicious a morn. There is no mistaking Dr. Topinard's creed. He says plainly: "Let us not blush for our ancestors; we have been monkeys, as those formerly have been reptiles, fish; nay, worms or crustaceans." These are the last words of an address, in which he pits against each other the conflicting opinions of Haeckel, Gaudry, Cope, Vogt, and the opinions of Vogt, in particular, who conflicts liberally with himself. Dr. Topinard's own conclusion is this: "The philosopher has said truly: 'Man is an intelligence (he means a thinking brain) served by organs.' We have descended then from the monkeys, or at least everything appears *as if* we had descended from them. From what monkey known or unknown? I do not know; no one of the present anthropoids has assuredly been our ancestor. From several monkeys or a single one? I do not know; and also do not know yet whether I am monogenistic or polygenistic (*i.e.*, from several lines of ancestry or from a single one). . . . Whatever may be the origin arrived at, that place, believe me, will be as enviable as you could desire. At the origin, towards the beginning of the Miocene, perhaps, monkey and man were but one; a division takes place, the fissure has grown, has become a crevasse; later, an abyss with talus more or less scarped, like the cañons of the Colorado—an abyss which widens every day under our eyes."² This means that every day man is seen with greater and greater distinctness to be far off from the brute. Thus we see that his evolution has settled down to be, without qualification, an exercise of materialistic faith, having for its motive of credibility the indomitable appetite for a materialistic life. And as to organic evolution farther down in the theory, or the development of living plants and animals from non-living, brute matter, that fond concept has never yet pretended to be emancipated from the servitude of blind belief; no, not belief, but impotent "expectation," where Professor Huxley left it years ago: "If it were given me," he said, "to look beyond the abyss of geologi-

¹ Opening address delivered before the 20th general meeting of the German Anthropological Association, Vienna, August 5, 1889. See *Smithsonian Report*, 1889, pp. 563, 569.

² Dr. Paul Topinard, lecture delivered March, 1888, in the *Ecole d'Anthropologie* of Paris. See *Smithsonian Report*, 1889, pp. 693-4.

cally recorded time to the still more remote period when the earth was passing through physical and chemical conditions, which it can no more see again than a man can recall his infancy, I should expect to be a witness of the evolution of living protoplasm from non-living matter. . . . That is the expectation to which analogical reasoning leads me ; but I beg you once more to recollect that I have no right to call my opinion anything but an act of philosophical faith."¹

VI.

One point more remains and that is the place of anthropology in Education. It has been proclaimed, and truly, that the art of education has felt "its progressive influence." And we have been told by a Catholic biologist of eminence that the clergy should be versed in biology.

If the science is taken in the sense of being a specialty, then, as a matter of course, any one who has time and taste, whether he be lay or clerical, has the franchise of this study as of any other. Great talents of irregular formation have been squandered on the pursuit ; and it is to be hoped that great talents will not be wanting in the cause of truth and divine faith, which, *purificans corda eorum*, cleanses, purifies and elevates the hearts and minds of men. Amongst the men of our day who are gifted with a scientific bent, almost all have gone adrift.

If the science is to be recommended to the clergy in particular, it can be only in the same way as the study of gnosticism once upon a time, of the Albigensian heresy, of Protestantism, or of any other parasitic growth of error or heresy which has fastened on Christian belief and moral life, has been commended to the attention of the custodians of the faith. Without a doubt the atheism of materialistic science is the error, the heresy, the idolatry, the cancerous growth of our day.

But in no sense, whether for clergy or laity, can biology or anthropology be recommended as an integral element of general education. It has not the educational virtue required. It is not exact, definite, formative of those habits of thought, which will persist in the useful and professional occupations of life. There is nothing more inexact and wavering, yet withal more exacting on the time and genius of a mature specialist, than the biology and anthropology of the present epoch. When these sciences shall have passed through the vagaries of a very wild youth, their results will be seen to coincide with that well-established anthropology, which is laid down distinctly and consistently in the Sacred

¹ Critiques and Addresses, "Spontaneous Generation."

Books. The physical, intellectual and moral characters of man and the races of men, the origin and term of mankind in this world, will never be found otherwise than as exposed in the anthropological text-book, which is so long in possession of the field,—the written Word of God.

A scientific temper, which means a scrupulous and rigid exactness, has its advantages in education. But it is the outcome of an exact science. Erudition, in measure and degree, belongs to a liberal and fundamentally broad education. But there is no degree or measure that can be made to fit a place in education for atheistic “anthropologies,” immodest “physiologies,” prurient “anatomies,” any more than for the thinly veiled or utterly undraped indecencies which are now so commonly allowed admission, under the name and pretence of “art” and “culture.” The art of true education must practice what it teaches—apply right names to good things, and deal with nothing else :

Populumque falsis
Dedocet uti
Vocibus.

Let the words of Professor Huxley be the epilogue to our historical sketch. Enthusiast as he was for his craft and its interests, he has recanted not a little, in favor of art and letters as true educational powers of the human mind. Speaking at the Royal Academy banquet, 1887, he recognized the “great truth that art and literature and science are one, and that the foundation of every sound education and preparation for active life, in which a special education is necessary, should be some efficient training in all three. . . . I see great changes,” he went on to say : “I see science acquiring a position which it was almost hopeless to think she could acquire. I am perfectly easy as to the future fate of scientific knowledge and scientific training. What I do fear is, that it may be possible that we should neglect those other sides of the human mind, and that the tendency to inroads, which is already well marked, may become increased by the lack of the general training of early youth.”¹

THOS. HUGHES, S. J.

¹ *Nature*, vol. xxxvi., 1887, p. 14.

THE INTELLECTUAL BASIS OF THE SUPERNATURAL.

THE idea of the supernatural order is the one Catholic idea which even many who study theology apprehend with more difficulty and less distinctness than any other. The dogmatic statements comprehended in it, are indeed, singly understood and believed. But their foundation in ultimate truths and the principle which unifies them and connects them with other dogmas is not always clearly and distinctly understood; and it is difficult to make it perfectly intelligible to those who have not thought and studied more deeply than is common. The principal reason of this lies in the very common lack of metaphysical insight into those first principles of rational theology from which alone an intelligent apprehension of the reasons of the doctrines taught by authority and received by faith can be gained. *Fides quaerens intellectum*, when it passes beyond positive theology, must continue its seeking by means of philosophy. The doctrine of the supernatural can only be profoundly understood by means of that highest metaphysics which reasons on the essence of God, the nature of creatures who have received from the Creator a specific intellectual and moral being, and the essential relations between these two correlated terms. Every one who knows what the Catholic doctrine is, knows that there is a supernatural order in which God has collocated angels and men. This is an order of initial grace and consummated glory. Grace elevates a rational being above his natural condition, giving him a new principle of life and action; and it is a gratuitous gift. This elevation is the exaltation of its subject to a higher destiny, a more sublime end, viz.: a beatific union with God. He is placed in a supernatural state, and brought to a supernatural end. Nature, in this connection, denotes all that is given to creatures purely and simply by the creative act. The being which is above nature denotes primarily God, and secondarily that participation with God which He imparts to a rational creature over and above the specific being which he has received by creation. The supernatural order is an order, in which rational creatures are raised above all created nature. No created being has a natural capacity to tend toward God by acts which prepare him for the immediate, intuitive vision of the essence of God, and the beatitude which is caused by this contemplation. Neither angels, nor man in his original integrity, nor the perfect humanity of Christ, have had such a capacity in their nature. Furthermore,

the most clear-sighted theologians extend the proposition still further, by affirming that supernatural grace elevates its subject above all nature that could be created; *Super omnem naturam creatam atque creabilem*. The purport of this proposition is: that it is the property of the divine essence alone to have itself, as intelligible, the object proportioned to intelligence in immediate, intuitive contemplation. This relation, so to speak, of God to Himself, under the concept of the intelligible and intelligence, is like self-subsistence, absolute being, infinitude, eternity, and other divine attributes, incommunicable to any created essence. To create a being, therefore, who, by his essence and nature, should have the divine essence as his connatural, proportionate, immediate intelligible object, would be to create another divine essence, another God; which is a contradiction in terms.

This is the thesis; which cannot, however, be assumed as certain without proof. According to the formula of St. Thomas, the difference between the being of God and the being of creatures can be expressed in these terms. The being of God is *esse irreceptum*, the being of creatures is *esse receptum*; the question is therefore, whether the natural faculty of intuitive vision of the divine essence is predicable, like self-existence, only of *esse irreceptum*, or is predicable also, as possibly communicable to the *esse receptum* of some species of intellectual nature. It may be argued that God *does* communicate this faculty, by a supernatural grace to intellectual natures, and therefore, that he could possibly communicate the same as a gift to the essential nature of similar but higher species. To this it may be replied, that such a communication can only be made to an intellectual nature, and that this nature must be first constituted in its essence and nature, before it can be a real term, substantially separate from the divine substance, and receptive of the divine communication producing a beatific union of mind and will with the mind and will of God. The hypostatic union of divinity and humanity in Christ pre-supposes a human nature, constituted in all its integrity, soul and body, sense, intellect and will, in order to have two terms, two natures, subsisting in one person. This is the real, actual mode of the Incarnation; and the actual mode of the inferior union of the blessed with God is by the union of intellectual beings, having their own proper faculties of intelligence and will, in an order essentially below the divine, with God, by supernatural grace. It is reasonable to think, that supposing the divine decree to effect the Incarnation in the specific human nature, and to give the beatific vision to angels and men, the mode of accomplishing this decree is not merely determined by the absolute will of God, but by a metaphysical necessity. It is reasonable to believe that God in giving the subsistence of a Divine Per-

son to the human nature of the Son of Man, so that the man Jesus is truly God has given the highest possible gift of love in the most perfect possible way. The Infinite Good in diffusing and communicating itself has attained the very apex of metaphysical possibility, has fully expressed the divine idea in the masterpiece of infinite wisdom and almighty power, the Incarnation of the Word. Now, the human intellect of Jesus Christ has not the faculty of the beatific vision or the right to it by his human nature, but by reason of his divine personality, through a supernatural communication of the subsistence of the Word to the distinct substance composed of soul and body which constitutes that individual humanity assumed by the Word. If any creature possessed naturally the intuitive vision of the essence of God, and the natural right to beatitude, he would have by nature that which the human nature of the Lord Jesus Christ only has supernaturally. Such a supposition appears to be incongruous, not only to the actual order of the Incarnation, and the actual order of elevated nature in angels and men, but to any conceivable or possible order. In such an imaginary order of intellectual nature, all who were created in it would be by nature sons of God, and not sons by adoption; a prerogative which belongs only to the Only-begotten Son of the Eternal Father. It is desirable to prove this metaphysically, if it can be done, and I think it can be done, even if the present effort should fail of success.

Aristotle, in his unequaled masterly manner, proves that in God intelligence and the intelligible are identical. This followed necessarily from the first principle of the Aristotelian and Catholic Theodicy, that God is most pure, simple, and perfect Act. The intelligible essence of God is *Ipsium Esse Subsistens*, in the total plenitude of being, intellectually self-conscious in an absolute equation of intelligibility and intelligence. If the divine, intelligible essence were naturally present to a created intellect, as its immediate and proportionate object of cognition, it would have this essence intrinsically within its own essence, and therefore also, by necessity, the inseparable *intelligent* essence of God. The communication of the divine essence is precisely what constitutes the eternal generation of the Son from the Father, and is possible only within the Godhead, but impossible as an act terminating in a creature. The intelligible and intelligent essence of God is essentially *Esse Irreceptum*. To suppose this *esse* received into a finite nature, which would be a mere receptacle of the divine act, having no specific intelligent act proper to itself, is unmeaning, pantheistic, self-contradictory. A separate, substantial intellectual nature must have its ideas, cognitions, possible and actual intelligence, self-consciousness, its total spiritual life, to itself, as its propriety, its specific in-

dividual mode of existence. Subject and object must be proportioned to each other, and correspond one to the other, in a perfect adequation. Aristotle and St. Thomas teach that in cognition the object must be appropriated by the subject, brought within its circle, and made in a sense one with it, so that *anima rationalis est quodammodo omnia*. Objects extrinsic to the mind, which cannot be brought ontologically and *physically* within it, must be made present to it *ideally* by species which represent them, and through which the objects themselves are known. Now, an intellectual nature cannot receive a proper and adequate species of an object wholly out of proportion to its capacity, transcending its utmost limit. If the created intellect which is imagined to have a natural intuition of God has no proper species or idea of its own representing the essence of God, then it has no nature and existence of its own, and it is God alone who thinks and acts in it as a mere receptacle or reflector of His light. If it has such a proper and adequate idea of its own, in the imaginary case, it is equal to God, it has a derived and created divinity, a proposition which is heretical and absurd. The created intellect is a finite subject and must have a finite connatural object. It cannot take into itself the infinite *Esse Irreceptum*. Its own *esse* is *esse receptum*, and therefore only that which has *esse receptum* can be its connatural, immediate object. The created intellect, therefore, raised to its highest power, cannot have an intuitive vision of the Divine essence, but only that mediate, indirect insight which comes by light reflected from created objects. This is the rational basis of the revealed truth, that the elevation of angels and men to an order, in which they are destined to the beatific vision of God, is wholly supernatural, a purely gratuitous grace from God. The specific character, the life, the destiny, and the ultimate felicity of rational beings is chiefly in their intellectual faculty and operation. This is so both in the natural and in the supernatural order. In the latter order faith, the radical principle of the life of grace, is in the intellect, as its subject, and the contemplation of God constitutes the supreme beatitude of the saints in heaven.

The consideration of the intelligible object and the intellectual operation is, therefore, the pivot upon which turns the decision of the whole problem of the difference between the natural order and the supernatural. When we inquire what cognition really is in its inmost nature, what is the cognoscitive operation and the distinct principle from which it proceeds, we find a great obscurity hanging over this topic of investigation. We have an apprehension of it from our conscious experience. But the metaphysical analysis of our faculties and operations is not an easy task. Children try to find and take hold of the nearest end of a rainbow, and our minds are similarly baffled in striving to seize hold of the elusive phe-

nomenon of cognition. It is said that a subject becomes cognoscitive when it can receive into itself some other form besides its own. But this is only stating a condition of cognition and not defining its nature. Natural and artificial mirrors receive the external objects before them into their own proper substance by a representation which gives us a very good analogical similitude of ideal representation. But this is not cognition. Again, we are told that the immaterial nature of soul makes it fit to return upon itself, and the freedom from dependence on matter for subsistence and operation enables spirit to return on itself by a perfect return. Very good! but this gives no insight into the sensitive or rational soul, or into sensible and rational cognition. We have our conscious experience, in which we know and feel what cognition is, and infer what the soul is, but our reflex concepts are obscure and confused, our intuitions and inferences are not to be adequately expressed in language which has only the x and y symbols of unknown quantities at its disposal.

However, as x and y can be used for algebraic operations, metaphysical terms of like nature can be used in legitimate metaphysical reasoning. Spirit, animal soul, sensitive cognition, intellectual cognition, are impenetrable by reflex analysis, but we have the inner sense of their reality, and can reason about their qualities and modes of operation. In the Aristotelian psychology we have a satisfactory theory of the organic and inorganic operation of the human cognoscitive faculties. It is familiar to students of philosophy, and need not be described. In regard to pure spirits, we cannot have so distinct an apprehension of their object and mode of cognition. In a general way we can perceive that they correspond to their intellectual nature. The whole supersensible world of ideas and spiritual beings is open to them and their mode of cognition is far superior to the human mode. How they have cognition of the sensible world without having senses is very obscure. They have this knowledge most perfectly, without any doubt, but the mode of it is indistinctly conceived by us and it is irrelevant to our present topic. Prescinding altogether from any changes in the natural condition of angels and of man, consequent upon their supernatural destination, the fall of some angels, the fall and restoration of man, we may consider the purely natural order as a hypotheticalal state. That is, supposing that God should create rational beings in a purely natural condition, for a purely natural end, what does their intellectual and moral perfection consist in, and what is the state of ultimate perpetual felicity which to them is attainable? There would necessarily exist a considerable specific difference between the conditions of pure and of embodied spirits. Besides, it is impossible for us to conceive how many different species of angels, and of beings generically similar to man,

God might, if he willed to do so, create and leave in the natural order. Such considerations may be put aside; for, in general, there is a similitude among all rational beings. The adequate object of intellect is being in all its latitude. For a finite intellect, the proportionate object is being, in a restricted sense, corresponding to the specific nature of the subject. It is its degree and mode of intelligence which determines the perfection and felicity of the intelligent being essentially. For all alike, the immediate, intelligible object is restricted to that being which is *esse receptum*. Thus, a solution of the problem, what kind of intellectual and moral perfection and felicity is possible without the intuitive vision of God, or any supernatural endowments, will be applicable to all conceivable instances. It is not difficult to imagine an intellectual perfection of indefinite extent, by taking a starting-point from the highest achievements of the human mind in its present inferior conditions. Remove all impediments to the widest acquisition of knowledge in the vast field of the universe. Remove all impediments to thought in the world of ideas and the contemplation of metaphysical truth. Remove all infirmity, all servitude to lower necessities, all limitation of time and distance; give the natural powers and faculties an ideal development, and we can imagine intellectual life and activity raised to such a high plane that all the combined wisdom and science of the ages, in comparison with those of such a high state, is like the babbling of infancy in comparison with the wisest and most eloquent language of educated men.

The moral perfection of a rational being follows from his intellectual perfection. Being, truth, goodness, are transcendental phases of one idea. The intelligible and the good are one. The *sanctity* of God is the unity of intelligence and will in the contemplation with complacency of the best, *i.e.*, the divine essence. This is also the *beatitude* of God. The complacency of the will is inseparable from the contemplation of the intelligence. The beatitude of this act of complacent intelligence excludes all possibility of desiring and choosing any increase or diminution of itself. The perfection of intelligence excludes all possibility of false judgment respecting the congruity of operations *ad extra*, in the free exercise of the power to communicate being by creation. The unity of will with intelligence precludes all possibility of choosing to do anything which the divine judgment does not approve as good. Unerring intelligence is the origin and source of the absolute moral perfection of God. In creatures, intellect gives direction and law to will. The more perfect is intelligence and reason the more fixed and invariable is the rectitude of the will. The connatural object of intellect is truth, which is one with goodness and being. Falsehood, evil, and nothing are one and the same negation of truth, goodness, and being. Intellect and volition cannot have

them as a positive term. They can only fall off from their real terms in part, by their own defectibility, into these negations, and return by a backward movement, toward the original nothing out of which they were created. Their peccability lies in their defective being. The defect is primarily in the intellect, which is liable to the illusion of a false judgment respecting the good which is eligible and preferable. A rational creature cannot assent to falsehood as falsehood, but only as under a delusive appearance of truth. We cannot choose evil by reason of its evilness, but only as presenting a delusive appearance of a good, eligible for the advantage and happiness of the subject. Now, when defectibility is supplanted by unerring perfection of intelligence and reason, there can be no such illusions to tempt and deceive, and, consequently, no motive for any evil, *i.e.*, immoral choice. The blessed in heaven and souls in purgatory have their contemplation immovably fixed upon God; these by the vision of His essence; those by faith and vivid apprehension; and they know him as their supreme good, with an equal determination of the will, which must follow the intellect. Therefore they are immutable in the love of God, and impeccable. In an inferior order, a rational creature made perfect in his natural state has no principle of moral deviation in him and no motive which can draw him away from rectitude. An intelligent, virtuous man, who is in full possession of his reason and contented with his condition, will not leap into the sea from a ship, as a man who is in great suffering, who is desperate, or mad, may do. The state of perfection in rational nature necessarily brings with it perfect felicity. And besides the happiness of contemplation and knowledge, there are many other ways in which the exercise of all the active powers and the enjoyment of the profusion of good things in the universe, especially the society of similar beings bound together in friendship and innocent, rational love, might fill up the measure of happiness to overflowing. There still remains to be considered the relation of rational beings in such a state to God, and the manner in which they can and must find their highest good in the knowledge and love of their Creator and sovereign Lord.

The human reason attains to a knowledge of God by its own proper mode, when there are no impediments to hinder the due activity of its powers, and favorable conditions exist for their development and exercise. The actual state of mankind is not, however, anything approaching to the ideal of human nature in the possible perfection which it might have in another order of Divine providence. What pure human philosophy has attained in a few instances, shows what could be attainable, in an ideal condition, in a better environment, under an order in which the latent capacities of human nature were fully developed, and its organic

constitution, freed from the law of mortality, made perfect and incorruptible. The intellectual nature and operation of angels are far superior to those of mankind, especially as it exists in a lapsed condition. Their natural knowledge of God through his works, especially as his attributes are reflected in the mirror of their own intelligence, is clear and sublime, far surpassing the highest human metaphysics. Rational beings of every kind and species, when their faculties are developed and their knowledge made perfect, must have an abstractive contemplation of God of a very high order. From knowledge naturally follow love and worship. There is a perfect concord between the creature and the Creator; not the friendship which results from that sort of equality which subsists between the adopted sons of God and their Father, but the amicable relation of loyal, favored subjects toward their sovereign. It does not seem reasonable to suppose that the actual and constant enjoyment of life in a state of purely natural beatitude principally consists in the happiness of an intimate communion with God. Their happiness is mediately and indirectly from him and in him by a participation in his gifts. But it is crowned and elevated by their very perfect knowledge and love of God as the author of nature and the supreme good. In this way Plato, Aristotle and other pagan sages estimated the highest perfection and felicity of rational beings. Beyond this there is no exigency and no capacity in rational nature, and when it is possessed as a secure inalienable right there is no sense of any lack or aspiration after a higher good. If there were, it would prove an exigency in nature for the supernatural. If God implanted this exigency, his goodness would demand the grant of the means of satisfying it. This grant would be due to nature, and no longer a gratuitous grace. Every nature must have its end and the means to it within its own limits. A natural destination to a supernatural end is a contradiction; it is a notion which subverts the true idea of the supernatural.

We have no means of knowing whether God has created or will create any species of rational creatures whose original destination is within the natural order. We can only make conjectures which are plausible, or, at best, may be regarded by some as probable. Natural beatitude does exist, however, as an appendix to the felicity of the blessed in heaven. Moreover, this is that part of their original heritage, which is left to those children of Adam who are deprived of the right to the kingdom of heaven by original sin, and who die without any personal, actual sin which deserves the forfeiture of the final beatitude which is due to nature. Created and destined for the supernatural order, they have fallen down into the order of nature through the sin of Adam, in whom the human race forfeited the gratuitous gifts originally conferred on it in the

person of its head. Those who have not been restored in Christ, and who have not incurred any demerits of their own, are ontologically and substantially what they would have been if they had been originally created and constituted in the state of pure nature. The intellectual difference, which is the basis of the entire difference of state between these human beings and those who are in heaven is this: they cannot see God by an intuitive vision of his essence; the others have this vision, which is beatific in a supernatural mode. It is impossible that a creature should have a faculty for seeing God. The Divine essence infinitely transcends every created faculty of cognition, and cannot become an *esse receptum* communicated to a finite essence.

It would seem from this that a creature cannot be made capable of the intuition, the facial vision of God. Nevertheless, it is of faith that beings subsisting in the angelic and in the human nature are elevated by grace to that supernatural state in which they behold God face to face. This is one of the mysteries of the divine revelation. It would be incredible if it did not have the veracity of God as the guarantee of its truth. Is it possible to obtain any insight into the mode by which the created intellect is made capable of an act so far above the highest reach of nature? In a question of this kind more reliance is to be placed on mystical than on speculative theology. Saints who have ascended the heights of contemplation can see farther into the mysteries of the faith than metaphysicians. The great doctors and other holy and enlightened teachers of a minor order are, nevertheless, metaphysicians and theologians, as well as mystic contemplatives. Therefore, they bring metaphysics and theology into their service when they attempt to explain the mode of supernatural vision in which the saints in heaven gaze upon the splendor of God. They are all agreed and teach one doctrine. This is that the essence of the beatified is united with the essence of God, and his native powers with the active principles of intelligence and volition in God. In our Lord Jesus Christ the union is hypostatic and the Divine Person subsists in the human nature. The human substance in its essential, specific integrity is not absorbed into the Divinity or blended with it, but remains as a distinct and perfect nature. In every other beatified being the nature remains in its own subsistence, existing in its proper hypostatic completion. The union is, therefore, not hypostatic, but an inferior kind of union. Nevertheless, it gives the creature a kind of equality with the Divinity, effects a certain degree of deification, an apotheosis, so that the only-begotten Son of God becomes one among many brethren sons of God by an adoptive filiation. This elevation of rational creatures is ineffable and inconceivable by us in our present state. It is an

inscrutable mystery, which is believed by divine faith in the word of God proposed to us by the Catholic Church.

The wisdom of the doctors cannot go beyond the statement of the simple fact of the beatific union which has just been given. The attempt to penetrate more deeply into the mystery would be futile. The concept must come from an experience which is impossible in this life; and without this concept derived from consciousness, an angel who should attempt to explain the intuitive vision of God could not be understood. We can understand only so far as this; that the object of faith which is obscurely apprehended by means of analogical concepts and figures of speech, is immediately and clearly apprehended, as it is, in its intrinsic reality and intelligible truth, by the beatified spirit. The same contemplation and complacency which in God terminate on his infinite plenitude of being in a comprehensive adequation, are in him in a diminished quantity which is greater or less, in proportion to his higher or lower degree. It is not comprehension even in the highest, for the finite cannot comprehend the infinite. Creatures are like greater or smaller lakes and vessels of clear water reflecting the heavens. They are filled with God to the utmost of their capacity, but their capacity is variable, and always finite. It is not easy to understand this; viz., that an intelligent spirit can see God, in God, immediately, without an intervening medium, and yet in a finite mode. It is nevertheless certain, that, as St. John of the Cross teaches, the spirit who sees God the most perfectly, sees most perfectly that he is incomprehensible by any intelligence except his own.

Perhaps an analogical illustration may diminish, though it cannot remove the difficulty. The sun is visible to us, but our vision is not comprehensive. The vision is enhanced by the use of a telescope. If it were possible to approach safely to a nearer distance, it could be seen more perfectly, and it is conceivable that it might be seen to the whole extent of its visibility by a being endowed with a sufficient capacity, whose vision would become comprehensive. The whole sun is seen from a distance by observers on the earth whose capacity for seeing it is limited by more or less restricted conditions. It is not, however, wholly seen until our hypothetical observer has obtained a comprehensive view of it. So, say theologians, the least of the beatified spirits sees God, as to his whole being, but not wholly, that is comprehensively. The greatest among them sees God, as the very same intelligible object, but by a nearer and clearer vision. But he cannot see him totally, comprehensively, because his being is infinite, and the capacity of seeing, in the creature is finite. The vague and unthinkable notion of an absorption into the divine being, and an identification with it, belongs to heathen theosophy and has no place in Christian theol-

ogy. The countless royal progeny of the universal king, each one distinct in his individual being, reproduces the image and likeness of the Father, after the model of the Eternal Son ; they rethink the thoughts of God, reverberate the mighty pulsations of his eternal love, and multiply by refraction the irradiations of his infinite light. Each one beholds, with an eye, which like the eagle's blanches not when gazing at the sun, the Unity and Trinity, the divinity united with the humanity in the Second Person, and the original archetype of all created things ; and in the contemplation of the supreme good and the supreme beauty, the splendor of the divine perfections, shares with God in his beatitude. In the mirror of the Trinity, he sees all that is knowable and lovable in God and his works, incessantly, and without weariness. This repose of contemplation is not however a quiet of inactivity. The eternal repose of God consists with a perpetual interior vital action and with a continual activity whose term is extrinsic to himself. The repose and activity of the blessed is analogous, and imitative of the divine life. The natural life and the natural powers are not absorbed or made quiescent, but are exalted, augmented and perfected ; in human beings not merely those which are spiritual, but also those which are corporeal and sensitive. Those blessed beings who live and reign with Christ are lords of the universe. This vast domain, spread out before them, which they can traverse at will, study and investigate at leisure, is all at their service. What we know of it now, which is very little, and what we conjecture, fascinates the mind, and this charm keeps astronomers fastened to their observatories through years and centuries, making a most laborious and slow progress in discovering the secrets of the heavens. What is the problem which the multitudinous orbs and nebulas are working out, what is the grand plan and final term of their evolution, transcends the capacity of the human mind to discover and to formulate into science. What then from this source alone, must be the delight of those exalted spirits to whom the whole domain is like an open and intelligible book !

The greatest earthly happiness has as one of its chief elements, society and friendship. The society of heaven embraces all the multitude of the angels and saints, bound together in celestial love and harmony. What are the employments which engage the activities of the blessed within their empyrean sphere and throughout the entire universe ? We may imagine in some inadequate way, but cannot conceive, by any efforts of the understanding, except in an obscure and general manner what they are. This we know ; that the portion of the children of God is life eternal, and transcends all that we can think or imagine. The perfection and beatitude of the children of God and co-heirs with the Lord Jesus Christ consists principally, in their supernatural union with God.

The intellectual basis of this divine, eternal life is in the capacity of beholding God, as he is, by an immediate, intuitive vision, for which they are made fit by the light of glory.

There remains only to be considered the intellectual basis of the inchoate supernatural life of faith in Christians, who are on the way to heaven, working out their salvation during the period of earthly probation. Salutory faith, hope, and charity absolutely require divine grace, and are impossible without it. Reason, by its native power, can rise to a natural knowledge of God as the author of nature. The human will, unaided by grace, can turn to God with a natural love. There can be natural virtues which are good moral qualities and habits and acts of natural virtue. The possibility, congruity, and actual concessions of the Christian Revelation can be proved and assented to, like any other rational truth or historical fact. Yet all this gives only the preamble of faith. The faith, hope, and charity by which the mind and heart turn toward God as the supernatural author, and move toward him as the supernatural end, differ specifically from the rational conviction that God is, that He is veracious, that His revelation is credible, and from a rational confidence in his goodness, a natural complacency in His perfections. Divine faith requires a special illumination of the mind, a special inspiration in the will, by virtue of which the intellect, determined by a voluntary and free act of the will, rises to a direct, immediate, and firm assent to the revealed truth on the sole motive of the veracity of God. This purely supernatural act of faith presupposes the rational judgment that it is reasonable to give this assent. But it is not its product, and is far from being a mere logical conclusion from the rational premises contained in the preamble of faith. It is the product of the action of the Holy Spirit and the concurrence of the human subject submitting itself to this gracious influence, and is the principle of a new and divine life. This elevation of nature is necessary in order to give the human subject a due proportion to its final destiny. It is an inchoate glorification. All the activities and movements which are a preparation for its final consummation must proceed from the mind and will, elevated and empowered by grace. Faith, hope, and charity are habits and acts proceeding from the renovated nature. Faith is a light which, although obscure as compared with the light of glory, presents God and His revealed mysteries before the intellect in a more direct and vivid manner than reason can do. It is a twilight preceding the illumination of the light of glory.

The analysis of the complex process in which the mind and will are elevated from their natural activity and above it, and yet in harmony with it, into the higher sphere of divine faith, hope, and charity, is a most delicate and difficult operation. The greatest theologians, such as De Lugo and Suarez, differ from each other

on this point. Where and how the natural glides into the supernatural, many have attempted to explain with ingenuity and subtlety; but after all has been said there remains a mystery which baffles every effort to penetrate its obscurity. Those who have faith have an inner sense of experience by which they are able to apprehend in reflection its difference from any mere inference of logic or metaphysical judgment. Those who have passed in their adult age from a state of doubt or unbelief to one of firm, unwavering faith, after a process of inquiry and study, are conscious of having made a passage out of darkness into light, effected by something more than a mere process of reasoning. Others, again, who seem to have gone through the preamble and to understand the motives of credibility, stop short at the gate and do not enter. Some who eventually pass through the gate pause and hesitate for awhile at the threshold. They say that they perceive the reasonableness of believing, but yet do not fully believe; that they wish to believe and yet cannot determine themselves to an explicit, undoubting faith in the truth proposed to them on the authority of God. Afterwards, the light enters their mind, and a persuasive influence moves their will in a hidden mysterious way, and they believe ever after without difficulty or effort. But after, as well as before, this transition, they can go on, both by a philosophical and a historical method, to study every topic of the Christian demonstration, and to gain a deeper understanding of all those doctrines and facts in which they believe on the motive of the divine veracity.

This motive is the intellectual basis of a supernatural assent to inevent truths, *e.g.*, the Trinity of Persons in which the One Divine Essence subsists, as evidence immediate or mediate is the basis of natural assent to self-evident and demonstrated truths. To sum up the whole matter, the creation and the ideas impressed upon it are the proportionate intelligible object of natural cognition, which contains a mediate, rational, abstractive cognition of God. God is the immediate intelligible object of supernatural cognition, together with his works as seen in him; and is the immediate credible object of supernatural faith. The intellectual basis of the supernatural mode of intelligence supposes and combines with itself the natural basis, elevates and augments it, and gives it perfection. The supernatural order is not a sequel of the natural order, nor due to any exigency of its principles, but a purely gratuitous concession of infinite goodness, a grace in the strictest sense. It culminates in the Incarnation.

There is the highest congruity in this order to the divine wisdom and goodness. Supposing the divine decree to create the universe and to bring it to its final term in Himself as final cause by an order of the highest congruity, in which good is communicated to the utmost degree of metaphysical possibility, God owes it to himself

and to his divine plan to establish a supernatural order. But the concession of grace is not due to any species or individual natures in particular. The vocation of the angels and of the human race was a grace. The assumption of the humanity of Jesus was a grace. As a consequence of grace, merit becomes possible in its subject by a free concurrence with the operation of grace. Where the merit exists and perseveres until the end of probation, or where there is an absolute promise of God to give grace and glory, a right of justice is created in the subject. But God remains perfectly free to withdraw grace which has been forfeited, to make his own conditions for receiving or regaining grace. He is also free to fill up his universe, if he please to do so, with rational creatures who are confined within the bounds of a purely natural order.

There are Catholic authors who have a very different conception of this whole subject. But they involve themselves in inextricable difficulties when they attempt to reconcile the conclusions of rational philosophy with the dogmas of faith. They are obliged to resort to ingenious and minimizing explanations of certain decisions of the Holy See in order to make their theory appear to be tenable and orthodox. They have the current teaching of theologians, with an increasing unanimity, against them. Their peculiar opinions, an inheritance from an earlier and less advanced stage of doctrinal development, are tending to become obsolete. Those who are well read in theology will understand at once the scope and purport of these remarks, and it is not necessary to furnish to others any clearer explanations on the present occasion.

Those who are seriously engaged in the study of theology and philosophy, and in the effort to harmonize the two sciences in a complete synthesis, will find that a clear and correct conception of the basis and principles of the supernatural order will throw a flood of light on the whole area of their thought and study. A host of misconceptions and difficulties are scattered like mists before the rays of this light. The noble effort to vindicate the ways of God to man, and to show inquiring minds the reasonableness of the Catholic Faith, is greatly facilitated. *Fides quærens intellectum* finds the object of its search and fills the mind with admiration of the views it has gained of that eternal plan of God. This is a plan which only His infinite wisdom could have devised, which only His almighty power can execute and bring to its accomplishment in the kingdom of the heavens. Human reason, left to itself, could never have guessed at, and when it is proposed to belief, cannot demonstrate, its possibility. But, enlightened by faith, it can understand, in a measure, its reasonableness and grandeur.

AUGUSTINE F. HEWIT.

THE POPE'S LETTER TO THE AMERICAN BISHOPS
ON THE SCHOOL QUESTION.

EDITORIAL NOTE.

TO the advocates of Christian Education, it may seem strange that our REVIEW was not more aggressive in the cause of our Catholic Schools during the recent controversy which the following important Papal document is intended to terminate. No one, we trust, doubted for a moment, that we were, head and heart, with the episcopate of the country. But we deprecated most strongly this unnecessary controversy, and did all in our power to prevent, and after its inception, to quietly terminate it. Inopportune truth is sometimes more hurtful in its effects on men than falsehood. It is true, that though wars between men may cease, wars between great principles cannot cease. But there may be "suspension of hostilities." The time to give battle is an important question for every general and no more inopportune time could have been selected for our educational civil war. Now that it is over,—as we hope,—we are astonished at how few principles were involved in the whole struggle.

It should be a source of gratification to the friends of this REVIEW, that we pursued as we advised, a pacific course. We declined to publish an article, written by one of the most erudite theologians of the age. We were constrained to do so, because though the learned writer professed to treat of great educational principles alone and not mingle with popular controversies here, yet we felt that people would certainly apply these principles to present contentions, and use his authority as well as that of the REVIEW, to enforce their views. We subsequently declined to publish an exceedingly able paper on the opposite side and otherwise endeavored to terminate the controversy. But, as we feared, it swept onwards. It soon passed the confines of reason into that of feeling. Relations between old friends appeared somewhat strained by it. Now, that the voice of supreme authority has quelled the storm, we begin to wonder why this controversy should have arisen. We can quite understand how, after it had arisen, both parties should become excited. On one side, the friends of the parochial schools feared and not without reason, that deep injury would be inflicted on these institutions. It is certain that many children were withdrawn from these schools because of the misinterpretations of the proposition of the Apostolic Delegate. One school in the west lost three hundred children in a few weeks. His Excellency's subsequent declaration that he was the friend

of parochial schools, followed so quickly by the Papal document, addressed to the American Bishops has prevented further defection which, otherwise, would certainly have appeared at the opening of the next scholastic year. Can we wonder that people who have made such sacrifices to build and maintain their parish schools, should be thoroughly alarmed and indignant at such a prospect?

On the other hand, some of these good people were represented, in the heat of controversy, as holding the principle that the State should have nothing to say on the great question of the education of her own citizens. She has the undoubted right to provide for their education, and in a country like this, where every man is a voter, and thereby a ruler, to see that they have the necessary qualifications to discharge the duties of their citizenship. We believe that when the smoke of battle shall pass away, cool impartial heads, representing the Church and the State, will deliberate and determine at last on some "modus vivendi." It is the interest of both to perfectly understand each other. The Catholic Church in her organization and spirit, is in harmony with our republican form of government. The State here is not hostile to the Church and only desires to see its wonderful unitive influences exercised in their plenitude, for the restraint of human passion and the general good of the community. If religious education will greatly aid this restraining power, it is of supreme importance that it should be fostered for the benefit of both Church and State.

P. J. R.

LITTERÆ APOSTOL. DE QUESTIONE SCHOLASTICA.

Emo e Rmo Sig. Mio Ossmo.

Qui unita trasmetto alla E. V. la lettera pontificia sopra la nota questione scolastica. Non dubito che ne apprendera Ella con piacere il contenuto, e spero che l'importante documento varra a ristabilire la calma nell'animo di quanti si sono interessati alla questione anzidetta. Nell'aggiungere essere desiderio del Santo Padre che V. E. si compiaccia di far imprimere la lettera medesima e di curarne quindi la distribuzione a tutto l'episcopato degli Stati Uniti mi onoro de baciarle umilissimamente le mani e con profonda venerazione mi confermo

Di Vostra Eminenza

umo devmo servitore vero

M. CARD. RAMPOLLA.

Sig. CARD. GIBBONS.

Arcivescovo di Baltimora.

(Con lettera pontificia.)

ROMA, 1 Giugno, 1893.

DILECTO FILIO NOSTRO JACOBO TIT. S. MARIAE TRANS TIBERIM S. R. E.
PRESBYTERO CARDINALI GIBBONS ARCHIEPISCOPO BALTIMORENSI ET
VENERABILIBUS FRATRIBUS ARCHIEPISCOPIS ET EPISCOPIS FOEDERATA-
RUM AMERICA SEPTENTRIONALIS CIVITATUM.

LEO PP. XIII.

Dilecte Fili Noster, Venerabiles Fratres, Salutem et Apostolicam Benedictionem.

Clara saepenumero edidimus argumenta tum sollicitudinis qua tenemur erga fideles sacrorumque Antistites foederatarum Americae septentrionalis civitatum, tum singularis benevolentiae qua partem istam Dominici gregis complectimur. Ad haec illud accessit haud sane obscurum animi Nostri testimonium, quod ad vos miserimus Delegatum Nostrum Venerabilem Fratrem Franciscum Archiepiscopum tit. Naupactensem, virum egregium, doctrina non minus quam virtute praestantem; prout vos ipsi, in proximo Archiepiscoporum conventu Neo-Eboraci habito, palam testati estis, ita confirmantes fiduciam, quae in prudentia ejus a Nobis fuerat collocata. Ipsius autem legatio eo valuit primum ut publicum a Nobis extaret testimonium et propensae voluntatis erga patriam vestram et magnae existimationis erga eos qui istic reipublicae cum potestate praesunt: nomine enim Nostro adfuturus ille erat in dedicatione amplissimae copiae excellentium omne genus rerum in urbe Chicago expositae, cujus et Nos participes extitimus, a praesidibus iisdem comiter invitati. At ejusdem vero legationis hoc praeterea fuit propositum ut perpetua fieret quodammodo Nostra apud vos praesentia, Delegatione Apostolica permanente Washingtonii constituta. Quo facto luculenter declaravimus non modo nationem vestram perinde a Nobis diligi atque alias maxime florentes, ad quas viros cum auctoritate legare consuevimus, sed etiam a Nobis vehementer optari ut vestrum istorumque fidelium mutuae ad Nos conjunctionis vincula, tanquam filiorum ad patrem, arctiora in dies consistent. Nec leve quidem cepimus ex eo solatium quod novum hoc Nostrae erga vos providentiae judicium communis istic secuta sit gratiae in Nos studiique significatio. Jamvero pro paterna in vos sollicitudine Nostra hoc in mandatis praecipue dedimus ipsi Archiepiscopo Naupactensi, ut omnem conferret operam et fraternae caritatis industriam ad omnia evellenda dissidii germina in controversiis nimis cognitis de recta catholicae juventutis institutione; cui dissidio per id tempus addebant faces vulgata quaedam doctrinae capita et sententiae de quibus concitata erat ultro citroque disputatio. Mandatis hisce Nostris omnino paruit idem Ven. Frater, ac novembri mense superioris anni Neo-Eboracum perrexit, quo tecum, dilecte Fili Noster, ceteri convenerant regionis istius Archiepiscopi, desiderio Nostro obsecuti, quod erat a Nobis per Sacram Congregationem de Propaganda Fide significatum, ut, consultis antea suffraganeis suis, consilia conferrent ac deliberarent de optima ratione prospiciendi pueris fidelibus qui pro scholis catholicis Gymnasia celebrent publica. Quae sapienter a vobis in eo conventu decreta sunt placuere eidem Archiepiscopo Naupactensi, qui, collaudata pro merito prudentia vestra, censuit optimas ex iis utilitates esse manaturas. Quod nos judi-

cium perlibenti animo confirmamus, et justas Tibi ceterisque Praesulibus tecum congressis laudes tribuimus, quod opportune consilio et expectationi Nostrae responderitis. Eo autem tempore idem Ven. Frater quum vellet, ut Nobis in optatis erat, quaestiones praecidere de recta juventutis institutione, de qua, jam diximus, incensis animis acrique partium studio, editis etiam scriptis, certabatur, propositiones quasdam vobis exhibuit ab se concinnatas, duplicem attingentes ordinem quo scientia veritatis et actio vitae continetur. Quarum vim et pondus propositionum quum graviter perpendisset Archiepiscoporum coetus, et quasdam in eis declarationes emendationesque petiisset, utrumque Naupactensis Antistes alacer praestitit. Quo facto spectabilis idem coetus finem fecit sessionum, aperiens grati animi sensus profitensque probari sibi eam agendi rationem, qua ille partibus singularis muneris a Nobis crediti erat perfunctus. Explorata haec omnia habuimus EX EJUSDEM ACTIS CONVENTUS QUAE DEFERENDA NOBIS CURAVISTIS. Verum omnivero eae ipsae Delegati Nostri propositiones quum in vulgus importune editae essent, continuo inflammatis animis novae excitae sunt controversiae, quae tum falsis interpretationibus, tum insimulationibus malignis per ephemerides diffusis, latius graviusque exarserunt. Tunc quidam sacrorum Antistites regionis vestrae, sive quod interpretationes aegre ferrent quibus nonnullae ex iis propositionibus explicabantur, sive quod consecraria metuerent quae inde ex ipsorum sententia ad animarum perniciem deduci possent, confidenter causam Nobis aperuerunt anxietatis suae. Nos autem memores animarum salutem supremam esse legem quam Nos imprimis spectare oportet, simulque optantes novum vobis offerre pignus sollicitae caritatis Nostrae, unumquemque volumus vestrum, datis privatis litteris, suum ea de re iudicium liberrime Nobis patefacere: quod singillatim a vobis actum est diligenter. Hisce Nos expensis litteris facile comperimus quosdam ex vobis nihil omnino in eis ipsis propositionibus deprehendisse quod timoris causam afferret; quibusdam vero videri per eas propositiones ex parte abrogatam legis disciplinam scholasticae quam Synodi Baltimorenses sanxerunt, adeoque injectum sibi esse metum ne diversa illarum interpretatio tristia foret paritura dissidia, unde scholae catholicae caperent detrimenta. Rem Nobis graviter ponderantibus profecto persuasum est huiusmodi interpretationes alienas prorsus esse a mente Delegati Nostri, ut nimirum a sententia procul absunt hujus Apostolicae Sedis. Sane praecipuae ab eo allatae propositiones e decretis haustae sunt Concilii Baltimorensis III., statuuntque imprimis provehendas esse studiosissime scholas catholicas, iudicioque et conscientiae Ordinarii permittendum, qui pro re nata decernat quando fas nefasve sit scholas publicas adire. Jamvero si quovis in sermone sic accipienda sunt ea quae fuerint enunciata posterius, ut iis congruant, non adversentur, quae antea sint dicta, plane dedecet nec aequum est ita secunda explicari ut a prioribus discrepent. Idque eo vel magis valere debet quod scribentis mens nullo modo lateret obscura. Siquidem cum propositiones ille proferret suas in spectabili coetu Neo-Eboracensi, testatus est diserte (QUOD QUIDEM PATET EX ACTIS) admirari sese pastorale studium Episcoporum Americae Septentrionalis propter decreta plena sapientiae, quae in tertia Synodo Bal-

timorensi, ad incrementa causae de catholica juventutis institutione, fuerant promulgata. Adjecit porro, ea decreta, prout generalem tradunt agendi normam, FIDELITER esse servanda: ac licet publica gymnasia penitus improbanda non sint (possunt enim casus incidere, ut Synodus ipsa perspexerat, quibus ea liceat celebrare) omni tamen ratione et ope connitendum esse ut scholae catholicae quam plures sint numero omnique re ornatae ac perfectae. Ceterum ne qua subsit in posterum ambigendi ratio vel opinionum dissensio in tanta rei gravitate, quemadmodum jam declaravimus in litteris Nostreis, die XXIII. Maii anno superiore datis ad Venerabiles Fratres Archiepiscopum et Episcopos provinciae ecclesiasticae Neo-Eboracensis sic iterum declaramus, quatenus opus sit, constanter servanda esse decreta quae, praemonente Apostolica Sede, in Synodis Baltimorensibus super scholis paroecialibus statuta sunt, et quaecumque alia a romanis Pontificibus sive directe sive per Sacras Congregationes praescripta sunt in eadam causa. Ex quo certa nitimur spe (quam vestra erga Nos et Apostolicam Sedem studia maxime foveant) nihil obfuturum, quominus sublata quavis vel causa erroris vel anxietate, operam daturi sitis, conjunctissimis in caritate perfecta animis, ut in ista quae latissime patet terrarum orbis parte magisque regnum Dei propagetur. Dum autem naviter incumbitis ad curandam Dei gloriam et creditarum vobis animarum salutem, iidem contendite vestris prodesse civibus addictamque patriae voluntatem probare, ut facile intelligant qui rempublicam administrant quam validum suppetat in catholica Ecclesia praesidium ad tuendum civitatis ordinem et populi prosperitatem augendam.

Quod vero ad Te nominatim attinet, dilecte Fili Noster, pro certo habemus Te studiose curaturum ut quos tecum communicare animi sensus censuimus, ii ceteris pariter innotescant Venerabilibus Fratribus qui in civitatibus istis sunt foederatis, simulque adniscendum pro viribus ut sedata ac penitus dirempta, prout optatissimum est, controversia, animi quos ea concitaverat in muta benevolentia conquiescant.

Testem interea dilectionis Nostrae Apostolicam Benedictionem Tibi, eisdem Venerabilibus Fratribus, clero et fidelibus vigilantiae vestrae commissis peramanter in Domino impertimus.

Datum Romae apud S. Petrum die XXXI. Maii anno MDCCCXCIII., Pontificatus Nostri decimo sexto.

LEO PP. XIII.

TRANSLATION.

Most Eminent and Reverend Dear Sir:

I herewith transmit to Your Eminence the Pontifical letter upon the noted school question. I do not doubt that Your Eminence will read with pleasure its contents, and I hope that the important document will see calm re-established in the minds of all who have been interested in this question. It is the desire of the Holy Father that Your Eminence would kindly have the letter printed and distributed to all the Bishops of the United States. I would remain, with profound respect, Your Eminence's devoted servant,

M. CARDINAL RAMPOLLA.

TO OUR BELOVED SON, JAMES GIBBONS, CARDINAL PRIEST OF THE HOLY ROMAN CHURCH, TITULAR OF ST. MARY'S BEYOND THE TIBER, ARCHBISHOP OF BALTIMORE, AND TO OUR VENERABLE BRETHREN, THE ARCHBISHOPS AND BISHOPS OF THE UNITED STATES OF NORTH AMERICA.

POPE LEO XIII.

Beloved Son and Venerable Brethren, Health and Apostolic Benediction :

We have often given manifest proofs, both of our solicitude for the welfare of the faithful people and Bishops of the United States of America and of the peculiar affection with which we cherish that portion of our Saviour's flock. Of this we have given an additional and unmistakable evidence in sending to you, as our Delegate, our Venerable Brother Francis, Titular Archbishop of Lepanto, an illustrious man, not less pre-eminent by his learning than by his virtues, as you yourselves, in the recent meeting of the Archbishops in New York, have plainly testified, thus confirming the trust which we had reposed in his prudence.

Now, his legation had this for its first object: That it should be a public testimonial of our good will towards your country, and of the high esteem in which we would hold those who administer the government of the Republic, for he was to assist, in our name, at the dedication of the Universal Exposition held in the city of Chicago, in which we ourselves, by the courteous invitation of its Directors, have taken part.

But his legation had this, also, for its purpose: That our presence should be made, as it were, perpetual among you by the permanent establishment of an Apostolic Delegation at Washington. By this we have manifestly declared not only that we love your nation equally with those most flourishing countries to which we have been accustomed to send representatives vested with our authority, but, also, that we vehemently desire that the bonds of mutual relationship binding you and your faithful people with us, as children with their Father, should grow closer every day. Nor was it a small comfort to our heart that this new act of our care in your regard was followed by a general outpouring of thanks and affection toward us.

Now, in our paternal solicitude for your well-being, we had, above all, given command to the Archbishop of Lepanto that he should use all his endeavors and all the skill of his fraternal charity for the extirpation of all the germs of dissension developed in the too well-known controversies concerning the proper instruction of Catholic youth—a dissension whose flame was fanned by various writings, published on both sides. These commands of ours our Venerable Brother fully complied with, and in the month of November of last year he repaired to New York, where there had assembled with you, beloved son, all the other Archbishops of your country, they having complied with the desire which I had communicated to them through the Sacred Congregation of the Propaganda, that, after conferring with their suffragans, they should join counsels and deliberate concerning the best method of caring for those Catholic children who attend the public schools instead of Catholic schools.

The things which you wisely decreed in that meeting were pleasing to the said Archbishop of Lepanto, who bestowed merited praise on your prudence and expressed his belief that these decrees would prove most useful. This judgment we, also, with great pleasure confirm, and to yourself and the other Prelates then assembled with you we give deserved praise for having thus opportunely responded to our counsel and our expectation. But, at that same time, our said Venerable Brother, wishing, as it was our desire, to settle the questions concerning the right instruction of Catholic youth, about which, as above stated, controversy was being waged and writings published with excited minds and angry feelings, laid before you certain propositions, put in shape by himself, touching upon both theoretical principles of the subject and their practical application. When the meeting of the Archbishops had seriously weighed the meaning and bearing of these propositions and had asked for certain declarations and corrections in them—all this the Archbishop of Lepanto cheerfully complied with, which, being done, the distinguished assemblage closed its sessions with a declaration of gratitude and of satisfaction with the way in which he had fulfilled the commission entrusted to him by us. All this we find IN THE MINUTES OF THE MEETING, WHICH YOU HAVE TAKEN CARE TO SEND US.

But these propositions of our delegate having been inopportunately made public, minds were at once excited and controversies started afresh, which, through false interpretations and through malignant imputations scattered abroad in the newspapers, grew more widespread and more serious. Then certain Prelates of your country, whether displeased with the interpretations put upon some of these propositions or fearing the harm to souls which it seemed to them might thence result, confided to us the reason of their anxiety. And we, knowing that the salvation of souls is the supreme law to be ever assiduously borne in mind by us, wishing, moreover, to give you another proof of our solicitous affection, requested that each of you should, in a private letter, fully open his mind to us on the subject, which was diligently complied with by each one of you. From the examination of these letters it became manifest to us that some of you found in the propositions no reason for apprehension, while to others it seemed that the propositions partially abrogated the disciplinary law concerning schools enacted by the Council of Baltimore, and they feared that the diversity of interpretations put upon them would engender sad dissensions, which would prove detrimental to the Catholic schools.

After carefully weighing the matter, we are intimately convinced that such interpretations are totally alien from the meaning of our delegate, as they are assuredly far from the mind of this Apostolic See. For the principal propositions offered by him were drawn from the decrees of the Third Plenary Council of Baltimore, and especially declare that Catholic schools are to be most sedulously promoted, and that it is to be left to the judgment and conscience of the ordinary to decide, according to the circumstances, when it is lawful and when unlawful to attend the public schools. Now, if the words of any speaker are so to be taken that the latter part of his discourse shall be understood to agree, and not to

disagree, with what he had said before, it is surely both unbecoming and unjust so to explain his later utterances as to make them disagree with the preceding ones. And this is the more true since the meaning of the writer was not at all left obscure. For, while presenting his propositions to the distinguished meeting in New York, he expressly declared (AS IS EVIDENT FROM THE MINUTES) his admiration for the zeal manifested by the Bishops of North America in the most wise decrees enacted by the Third Plenary Council of Baltimore for the promotion of the Catholic instruction of the young. He added, moreover, that these decrees, in so far as they contain a general rule of action, are FAITHFULLY to be observed, and that, although the public schools are not to be entirely condemned (since cases may occur, as the Council itself had foreseen, in which it is lawful to attend them), still every endeavor should be made to multiply Catholic schools and to bring them to perfect equipment. But in order that, in a matter of so grave importance, there may remain no further room for doubt or for dissension of opinions, as we have already declared in our letter of 23d of May of last year to our venerable brethren, the Archbishop and the Bishops of the Province of New York, so we again, as far as need be, declare that the decrees which the Baltimore Councils, agreeably to the directions of the Holy See, have enacted concerning parochial schools, and whatever else has been prescribed by the Roman Pontiffs, whether directly or through the Sacred Congregations, concerning the same matter are to be steadfastly observed.

Wherefore, we confidently hope (and your devotedness to us and to the Apostolic See increases our confidence) that, having put away every cause of error and of all anxiety, you will work together, with hearts united in perfect charity, for the wider and wider spread of the Kingdom of God in your immense country. But while industriously laboring for the glory of God and the salvation of the souls entrusted to your care, strive also to promote the welfare of your fellow-citizens and to prove the earnestness of your love for your country so that they who are entrusted with the administration of the government may clearly recognize how strong an influence for the support of public order and for the advancement of public prosperity is to be found in the Catholic Church.

And as for yourself, beloved son, we know for certain that you will not only communicate to our other venerable brethren in the United States this our mind which it hath seemed good to us to make known to you, but that you will also strive with all your power that the controversy being not only calmed, but totally ended, as is so greatly to be desired, the minds which have been excited by it may peacefully be united in mutual good will.

Meanwhile, as a pledge of our affection, we most lovingly in the Lord bestow upon you, and upon our said venerable brethren, and upon the clergy and faithful people entrusted to your care, the Apostolic Benediction.

Given at Rome, from St. Peter's, on the 31st day of May, in the year 1893, the sixteenth year of our Pontificate.

LEO XIII., POPE.

Scientific Chronicle.

THE LIFE-SAVING SERVICE OF THE UNITED STATES.

Annual Report of the Operations of the United States Life-Saving Service for the Fiscal Year Ending June 30, 1890. Government Printing Office, Washington, 1892.

Revised Regulations for the Government of the Life-Saving Service of the United States. Ibid., 1884.

Organization and Methods of the United States Life-Saving Service. Ibid., 1890.

Instructions to Mariners in Case of Shipwreck, etc. Ibid., 1888. The first three by S. I. Kimball, General Superintendent; the last by Lieutenant C. H. McLellan, U. S. R. M., Assistant Inspector of the Service.

THE first authentic account we have of a voyage by sea is charmingly simple. A ship is built from the plans of the Master Workman, and finished from stem to stern, inside and out, to the most minute details. When all is ready, an astonishing cargo of live-stock, with provisions for a twelve months' cruise, is got safely aboard and carefully stowed away. A father and his three sons constitute the whole crew; their wives are the only passengers.

Instead of launching their ship into the waters, as we do now, they wait in patience till the water comes to them and floats them away. Whither bound they know not; they only know that they are floating above the ruins of a drowning world, and that their great Captain above will bring them safe to land when the fearful wrack has passed away.

And so it was, and it was well it was so, for that good ship was freighted with the destinies of the human race. She never made a second voyage; she accomplished her whole mission in one, and was abandoned on the mountain side where she first made land. Those who were in *her* were saved, and no one was saved in any other ship. There was but one ark. The evidently mystical meaning of these things we leave to other, abler pens, while we confine ourselves to themes less exalted.

Having been taught the way, men soon began to build ships on their own account, and then disasters began to occur, not only on the open sea, but even more frequently on the shores themselves. In a word, when "*men began to go down to the sea in ships*" they sometimes went *under* the sea, ships and all, and stayed there. Now, next to the saving of a human soul, there can be no deed more noble than the saving of a human life; and when this is done in the face of difficulties, hardships, and dangers, it rises into heroism. Nothing of this world is more sacred

than a human life, and hence it would seem that men ought to use every possible means for the prevention of shipwrecks, and, when prevention has failed to prevent, for the succor of those who are exposed to danger. Some of the more important means of prevention have been sufficiently detailed in previous articles on "Light-Houses," etc. The means of succor come under the head of "Life-Saving Service."

As far back at least as the times of the Roman emperors there were laws relating to wrecks, but the term was used in a very restricted sense, only meaning ships or goods cast on land by the sea. When goods thrown overboard sink and remain under water they are called *jetsam*; when they float they are called *flotsam*; when they sink, but have been marked by a buoy or float, they are called *ligan*. These three classes constitute what were called derelict or abandoned goods. Still, it requires quite an effort to comprehend how the term "derelict" could be applied to the *ligan* when it was the evident intention of the owner *not* to abandon his goods. According to the natural law, truly derelict goods may be taken possession of by him who finds them, but positive law has, in most countries, restricted this right more or less.

In the Roman law, at least in later times, wrecked goods were restored to the original owner in case he claimed them before a judicial tribunal within a year and a day; if he failed to do so they became the property of the state. Theft from wrecks was regarded as aggravated on account of the helpless condition of the owner, and was punished by a four-fold fine if action was brought against the thief within a year and a day; otherwise, the thief was liable for the loss simply. Plunderers of wrecks and those who showed false lights in order to lure ships on to destruction were, besides, punished by criminal procedure.

These laws regarding the plunderers of wrecks—"wreckers" they were called—have existed, with certain modifications, among all civilized nations down to our own days. The word "wrecker" affords a curious example of a change from a bad signification to a good one, since it formerly meant a destroyer and plunderer, while it is now used to signify a person lawfully employed, under contract, to save shipwrecked goods for their owner.

In France, England, the Netherlands, and elsewhere the laws were twisted and turned and modified and amended in various ways in order to head off these plundering wreckers; but the wreckers managed pretty well to hold their own, and indeed much more than their own, in spite of kings, sheriffs, laws, and regulations. In the time of Henry III., of England (1216), a law was enacted to the effect that if a man, a dog, or a cat escaped alive from a ship, such a ship was not to be adjudged a wreck, but ship and goods must be taken care of by a king's officer, and if any one sued for them within a year and a day, and proved his claim, they were to be restored to him. If, however, no living thing escaped, the goods, ship, and all belonged to whoever first took possession of them.

The law meant well enough, for it was intended as a protection to the rights of the surviving owner, and the dog and cat were probably put in

as a sort of connecting link between the goods and any possible heirs on shore ; in other words, as *a* means of proof that the wreck did belong to such and such parties. It seemed to work well enough at first, but later on some wise judge, in the fullness of his wig and the emptiness of his head, took the escape of a living being as the *sole* and *only* proof of ownership, and his successors followed for hundreds of years the lead of their insane predecessor. The result was disastrous. The luring of ships on to destruction by false lights became an almost regular business, and no one, man, dog, or cat, was allowed to escape alive to make any claim. In 1771 Lord Chief Justice Mansfield rose in his might and declared that "the ruling of the law, as applied for several centuries, was contrary to all principles of law, justice, and humanity," and he returned to the original, common-sense interpretation.

Although in the oldest laws relating to the matter mention was made of affording succor to shipwrecked persons, yet, practically, the saving of property was considered the more important, and no organized effort was made for the saving of life till near the end of the eighteenth century. In England the first life-boat was invented about 1784, and only in 1791 were the first serious steps taken for the rescue of the shipwrecked, and even then it seems to have been the work of private individuals.

In our own country, in 1786, the Massachusetts Humane Society was instituted for the relief of distressed persons in general, but, three years later, the society happily resolved to devote its entire energies to the relief of persons shipwrecked on the adjoining coasts. This "child of a hundred years" is hale and hearty, and is doing good work yet. May its shadow never grow less.

It was almost sixty years after this date before the Government even thought of lending its aid, and its first thought was not a big one. Congress, in 1848, made an appropriation of \$10,000, to be expended for the rescue of human lives, in case of shipwreck, on the coast of New Jersey. This may be called the birth of our life-saving service. In less than fifty years it has grown to healthy, vigorous manhood, and now ranks among the best-organized institutions of the country. But its early progress was slow. For more than twenty years no regular crews were employed, and even though small sums were from time to time appropriated for boat-houses, boats, etc., yet, without the aid of trained and skilled hands, all mere material appliances could show but meagre results.

At last the nation awoke, and, on April 20, 1871, Congress made an appropriation of \$200,000, to be expended for life-saving purposes through the medium of the Revenue Cutter Service. The chief of this service, Mr. Sumner I. Kimball, a young man of superior ability, who had just been appointed to his office, entered heart and soul into the life-saving phase of his duties. In the course of the next seven years he showed such splendid results that the life-saving service was separated from the revenue service and erected into a distinct bureau under the Secretary of the Treasury. President Hayes, in 1878, appointed Mr. Kimball general superintendent of the new life-saving service, which office he ably fills to the present time. Every detail of every accident

that has happened to life or property within the precincts of the life-saving service during twenty-two long years, has passed in review before his searching eye. How many a wail has come up from the great deep and along its shores to find a sympathetic echo in his breast? How many a deed of heroic daring on the part of his own brave men has quickened that pulse and sent a thrill through that noble heart?

The publications whose titles we have placed at the head of this article give us a fairly full account of our life-saving service as it exists to-day. We shall draw upon them pretty freely for the facts and figures which follow, and which we think will be of interest to the readers of the *QUARTERLY*.

The sea and lake coasts of the United States have an extent of over 10,000 miles. For the purposes of the life-saving service this distance has been divided into twelve sections, called districts, in each of which has been established a certain number of stations. Thus:

	Stations.
First District (coasts of Maine and New Hampshire),	11
Second District (coast of Massachusetts),	21
Third District (coasts of Rhode Island and Long Island),	38
Fourth District (coast of New Jersey),	41
Fifth District (coast from Cape Henlopen, Del., to Cape Charles, Va.),	16
Sixth District (coast from Cape Henry, Va., to Cape Fear, N. C.),	29
Seventh District (coasts of South Carolina, Georgia, and eastern Florida),	12
Eighth District (coast of the Gulf of Mexico),	8
Ninth District (coasts of Lakes Erie and Ontario),	10
Tenth District (coasts of Lakes Huron and Superior),	13
Eleventh District (coast of Lake Michigan),	24
Twelfth District (Pacific coast),	10
Total,	233

From the foregoing table it appears that there is a striking disproportion in the number of stations for a given distance, at different places along the shores. This fact will come out more clearly, however, if, disregarding slightly the division into districts, we arrange the table, for the purposes of comparison, as follows:

	Miles.	Stations.
(1) From Quoddy Head, on the coast of Maine, to Race Point (the most northerly point of Cape Cod), we have a coast line of about	420	18
(2) Seaward coast of Cape Cod,	40	10
(3) Cape Cod to Montauk, L. I.,	110	10
(4) Seaward coast of Long Island,	120	32
(5) Coast of New Jersey,	130	41
(6) From Cape Henlopen, Del., to Cape Charles, Va.,	116	16
(7) From Cape Henry, Va., to Cape Hatteras, N. C.,	121	23
(8) From Cape Hatteras to Cape Fear, N. C.,	175	6
(9) From Cape Fear to Florida Keys,	700	12
(10) From Florida Keys to the Rio Grande,	1852	8
(11) On the Pacific coast,	1810	10
(12) On the Great Lakes,	3000	47

Of the twelve stations under No. 9, only two are real stations, the other ten being merely houses of refuge, of which more anon. Of the forty-seven credited to the Great Lakes, one is an isolated station at the Falls of the Ohio River, Louisville, Ky.

Pardon us, gentle reader, if we seem to have too great an inclination for tables; one more is necessary in order to render this matter perfectly luminous. It gives the average distance between stations in the different divisions we have just named, beginning with the coast where they are most thickly set and ending where they are most sparse. Thus we have, from station to station, as average distances:

	Miles.
On the coast of New Jersey,	3 $\frac{1}{6}$
On the coast of Long Island,	3 $\frac{3}{4}$
On the coast of Cape Cod,	4
Between Cape Henry and Cape Hatteras,	5 $\frac{1}{4}$
Between Cape Henlopen and Cape Charles,	7 $\frac{1}{4}$
Between Cape Cod and Montauk Point,	11
Between Quoddy Head, Me., and Race Point, Mass.,	23
Between Cape Hatteras and Cape Fear,	29
On the Pacific Coast,	181
On the Gulf Coast,	231 $\frac{1}{4}$
On the Lake Coast,	250
Between Cape Fear and Florida Keys,	450

The reason of this enormously greater concentration along certain stretches of coast than along others is founded on the principle of doing good first where it is most needed, keeping in view at the same time the claims of the greatest number. We shall take up then, for discussion, the different coasts, in the order last given.

The ocean shores of New Jersey and Long Island form with each other nearly a right angle, the one looking in an easterly, the other in a southerly direction. At the vertex of the angle is the harbor of New York. At the south end of the New Jersey arm, is the entrance to Delaware Bay. Along these shores there passes the enormous ocean commerce of New York, Brooklyn and Jersey City, and a great part of that of Philadelphia and Wilmington, as well as an immense amount of coasting trade.

This coast line of 250 miles is quite similar in character throughout nearly its whole extent. It is a strip of sand-beach varying from a quarter of a mile to five miles in width, and is separated from the main land, at some places by rather narrow stretches of water, at others by veritable bays. Thus we have Shinnecock, Moriches and Great South Bays, on the Long Island, and Barnegat and Great Bays on the New Jersey coast. This sand-beach is unbroken, except by the entrance to New York harbor, and by a few shallow inlets between the ocean and the waters within. There are consequently few available harbors.

But this is not the worst of it. If these sandy shores were all, and especially if they were of such a slope that ships driven upon them could come well up, few of these would be actually wrecked. Each

blow of a wave would tend to force the ship up beyond the impact of the succeeding wave, and little damage would be done. Besides, escape from a vessel, stranded under such circumstances, would not be a difficult task. But, the same causes, winds, currents and tides, which ages ago, built up this strip of sand, are now at work building, maintaining or shifting another strip, at a distance of from one to four hundred yards further seaward. It consists of a succession of sand-bars, more or less submerged, according to the condition of the tide, on which, in heavy gales, huge walls of surf continually form and break.

When a vessel is driven upon one of these sand-bars, in a violent storm, she will be alternately lifted and flung down by the rising and falling waves, until by the repeated blows she springs a leak or even has her back broken; or perhaps, she may stick fast, and then the huge waves will break over her in fury, and sweep away deck houses, sails, rigging, masts and everything that told of the once stately monarch of the seas. She lorded over them once; they will have their revenge now. We can bear with all this, for, great as they are, such losses can be repaired.

But there are, it might be truer to say there *were*, human lives there, and to escape in an ordinary ship's boat, through that wall of surf is always difficult, often impossible. And far away, a father, or a mother, a son, or a daughter, a brother or a sister, a husband or a wife, may be watching and waiting for a loved one's return. And many a time and oft there will be no return, until the deep gives up its dead. We too have known this pang, and forty-six years of a checkered life have not effaced its memory. "These sands are literally strewn with the half-buried and decaying skeletons of wrecked vessels, while the grave-yards of the coast villages and settlements abound with unmarked mounds that tell a sorrowful tale of the destruction of human life."

Similar conditions obtain on the eastern shore of Cape Cod, along which a great portion of the commerce of Boston must find its way; and what makes this coast still more dangerous is the prevalence of those dreadful northeastern gales which often drive shipping from the north and east, in darkness and fog, past its intended harbor, till it comes to find destruction on this merciless shore. "The shifting sand-bars of Cape Cod have hence become the burial-ground of unnumbered craft." All things considered, the coasts of New Jersey, Long Island and Cape Cod may be set down as the very worst within our boundaries. Here, therefore, the life saving service has multiplied its stations, and placed them near together, in fact almost within hailing distance, so that they may be able to co-operate in case of need.

The next in importance, according to our list, is the stretch of 121 miles from Cape Henry, Va., to Cape Hatteras, N. C., and following closely is the section just north of it, a run of 116 miles between Cape Henlopen, Del., and Cape Charles, Va. A good part of the ocean commerce of Philadelphia, and all that of Baltimore, Norfolk and Washington, as well as a large coasting trade, skirt along these shores. The same general formation, as above, of sand-ridge and outlying shoals, is

characteristic of all this coast. The bulk of the trade, however, being considerably less, and the climate in general milder than on the coasts further north, there are fewer wrecks, and the stations have been planted somewhat further apart, *i.e.*, from five to seven miles. Notwithstanding these distances, the forces of two or even three stations have, in some cases, been massed together, thus enabling them to do what neither alone could have hoped to accomplish.

Going northward again, we find that between Montauk Point, Long Island, and the southern extremity of Cape Cod (110 miles), the stations are about 11 miles apart. This coast line includes Nantucket, Martha's Vineyard, Block Island and the shores of Rhode Island. These coasts, unlike anything further south, are bold and rocky and apparently very dangerous; but they are well lighted and enjoy the advantage of many excellent harbors in which storm-tossed vessels may find refuge. Hence only points of greatest peril are covered by the Life Saving Service.

On the coast of Maine, New Hampshire, and part of Massachusetts (down as far as Race Point), the average distance between stations is 23 miles. And yet nearly the whole of these shores are covered with rocks, and abound in rugged headlands, islets, reefs, and every other coast danger known to the sailor. On the other hand, there are many excellent harbors, and, besides, a great part of the coast of Massachusetts is under the voluntary guardianship of the good old Massachusetts Humane Society, whose efficient work the Life Saving Service gladly and gratefully recognizes.

Retracing our steps once more to the "sweet, sunny South," we have, on the coast of North Carolina, between Cape Hatteras and Cape Fear, a distance of 175 miles, with stations about 29 miles apart. These are placed at the most exposed points, and are intended to guard the commerce of North Carolina, as well as the coasting trade in these regions.

The Pacific coast is not considered dangerous. From our southern boundary line, near San Diego, to San Francisco, a distance of about 600 miles, an almost perpetual summer reigns, and shipwrecks are so infrequent that stations are not needed. The rest of the coast, from San Francisco to the Strait of Juan de Fuca, across which we shake hands with our still separated brothers of Canada, is a coast of nearly 1200 miles in extent. It is bold and almost unbroken and almost without harbors. This would seem to point it out as a place to be shunned by the sailor. It has, however, compensating advantages, for it is a remarkably regular coast, and what is of more consequence, the winds are almost always from the north, and therefore parallel with the shore. The few points of danger are the entrances to the principal ports, and these are guarded by ten stations.

Our peregrinations will now take us back to the Gulf of Mexico. The character of this immense coast-line of more than 1800 miles is pretty much the same throughout. The water is shoal for a long distance from the shore, the shores themselves are generally low, and sandy or marshy. The dangerous winds are generally from the north or north-

east, and these tend to force vessels off, not on, shore, except where a portion of the Texan coast runs nearly north and south. On all the north shore of the gulf there is but one station; it is on Santa Rosa Island, at the entrance to Pensacola Bay, Florida, the remaining seven of this district being situated at the mouths of the bays and harbors of Texas.

The five great lakes, Ontario, Erie, Michigan, Huron and Superior cover an area of about 80,000 square miles, equal therefore to the combined area of New Hampshire, Vermont, Rhode Island, Connecticut and New York. That portion of their coast-lines falling within the boundaries of the United States is well on to 3000 miles. These lakes are open to navigation from about the beginning of April till the early part of December, being closed by ice for the rest of the year. There are not many natural harbors, but a great number of artificial ones have been formed, at the mouths of the rivers, by building protecting piers of masonry for a considerable distance out into the lakes.

The lakes are generally quiet and well behaved, and the astonishing commerce of these inland seas moves gaily back and forth. But at certain seasons, especially at the opening and closing of navigation, in the early spring and late fall, severe gales are experienced. These lash the waters into sudden fury, and vessels nearing a port, with little sea-room, are liable to miss the narrow entrance to the harbor and be stranded on the rocks outside, or be hurled against the piers themselves. In either case they are doomed to almost certain destruction. At some of these spots many disasters have occurred in a single day. For these reasons it is principally near the mouths of harbors that Life Saving Stations are required. At the present time there are 47 of them in active operation in the lake districts.

Lastly, we come to the coast, the safest of all, between Cape Fear, N. C., and the Florida Keys. It is a stretch of over 700 miles, where almost perpetual summer holds sway, and where shipwrecks are rare. Even if a vessel is unintentionally stranded, since there are few outlying sandbars, she will generally get well up on the shore, and those on board will easily make good their escape to land. Only two points, the entrance to Charleston Harbor, N. C., and Jupiter Inlet, Fla., have been deemed worthy of fully equipped stations.

The eastern coast of Florida being but thinly settled, castaways run far less risk of drowning than of starvation. Ten Houses of Refuge have therefore been established along the shore, at an average distance of about 26 miles apart. These houses are capable of accommodating twenty-five persons, and are provisioned with supplies sufficient for them for ten days. Guide posts, at every mile indicate the distance and direction to the nearest House of Refuge. One would think it would be almost fun to be wrecked on such a coast.

We have, so far, given in outline, an account of the character of our coasts, of their division into districts, of the number of stations in each district, and, in a general way, of their distribution along the shores. It will be remembered that there are 233 of these stations; some twenty

more have been authorized to be built, and the Superintendent is of opinion that, when these are completed, we shall have a sufficient number for the practical needs of our actual commerce.

Naturally the next point to be considered is the stations themselves and their equipment. The station buildings vary somewhat according to their location and date of erection.

1. Most of those on the New Jersey and Long Island shores have been enlarged from the boat-houses used by the old volunteers, before the employment of regular crews. Those built later are of a better and more convenient type. They are two-story structures, the lower floor being divided into four rooms; a boat-room, a mess-room (also used as a sitting-room), a keeper's-room, and a store-room. Wide, double doors, and a sloping platform extending from the sills to the ground, permit the easy egress and ingress of the larger pieces of life-saving apparatus. The second story is divided into two rooms; one is the sleeping-room of the men, while the other is provided with spare cots for rescued people, and is also used for storage. The larger stations have a separate room for a kitchen; in other cases, the mess-room must do duty for culinary needs. Every station is surmounted by a lookout or observatory, in which a day watch is kept. The roofs facing seaward, being painted a dark-red, are visible a long distance off shore. The stations are also marked by a flag-staff, 60 feet high which is used in signaling passing vessels by the International Code.

The equipment of the stations generally consists of two surf-boats, with their oars, compasses and other outfits, a boat carriage; two sets of breeches-buoy apparatus, a line-throwing gun with accessories, a gun-cart, a life-car, twenty cork jackets, two heaving-sticks with lines, a dozen Coston signals, a dozen signal rockets, a set of signal flags, a miniature set of signal flags for drill practice, a well-stocked medicine chest, a barometer, thermometers, spy-glasses, a speaking-trumpet, patrol lanterns, patrol checks or clocks, a supply of house-keeping furniture, dry clothing for rescued persons, fuel and oil, tools for the repair of boats and apparatus, official books of registry and blank forms, and a pretty fair library. At some stations where, in case of need, horses cannot easily be hired, a pair is kept and cared for by the crew. The foregoing list embraces only the more important items, but the talent for detail displayed by our Government is something amazing. The complete list of things supplied to a station, and for which the keeper is responsible, embraces entries under the heading of every letter of the alphabet except X and Y, and mounts up to 437 distinct kinds of articles; to be accounted for by the piece, or by the dozen, or the thousand, or by the pound, ton, gallon or yard.

2. The stations at the harbors in the Lake Districts differ from the preceding in that they are provided also with a heavy life-boat for severe outside work, and a small boat for quick work in the immediate vicinity of the station. The buildings are located as near the water's edge as possible, and an inclined platform, upon which are laid two tramways for the launching of the boats, extends from the boat-room

down into the water. The boats are kept mounted on cars, by means of which they can be put afloat with the men at their oars in half a minute. The surf-boat, mounted on its wagon, may be taken out by a rear door in case it should be necessary to transport it along the shore before launching.

3. The floating station at Louisville is unique. It consists of a scow-shaped hull, on which is a house of two stories surmounted by a lookout. Two boats and two reels of 5-inch manilla rope constitute about the whole of the life-saving apparatus. The ropes can be run off the reels in the boat house, or reels and all can be rolled on board the boats and transported elsewhere. The station is usually moored above the dam at a point where it will afford the readiest access to boats meeting with accident. It can, however, be towed from place to place, as in the great floods of 1883-'84, when it rescued and conveyed to places of safety 800 imperilled persons, men, women and children, and supplied food and other necessities to more than 10,000 more.

Among the articles enumerated above as belonging to a life-saving station, a few require some words of explanation. The surf-boat is but a development of the boat found in use among the fishermen of the New Jersey and Long Island shores, for crossing the sand-bars in their daily blue-fishing. The Beebe boat, named after the man who devised certain improvements in its construction, is built of white cedar with white-oak frames. It measures from 25 to 27 feet in length, with a beam of $6\frac{1}{2}$ to 7 feet, and a depth of 2 feet 3 inches to 2 feet 6 inches amidships. Its bottom is flat with little or no keel, and, without crew, it draws 6 or 7 inches of water. Its weight is from 700 to 1100 pounds. It is propelled by six to eight oars, 12 to 18 feet in length, and will carry, exclusive of its crew, from twelve to fifteen persons in a bad sea. No sails are used. It costs from \$210 to \$275. The Beebe-McLellan boat is similar to the preceding except that it is at the same time self-bailing. It has not as yet been thoroughly tested by experience, but the indications are that it will be successful, and that it will be able to carry sails. With the self-righting quality added, it becomes a true lifeboat, but the objection to the making of this addition, is that it is liable to render the boat too heavy for transportation along the sandy shores, and rather unwieldy in the water.

A good deal has been said and written in years past about the possibility of getting for use in the service some motive power other than human muscles. Steam has been proposed, and so has electricity, but in either case the weight of boiler and engine, or of accumulators would render the boat entirely too heavy for transportation along the shores, and make it draw too much water to float over the bars. Moreover, in case of a capsizing, the fires would be extinguished, the boiler would probably collapse, and everything would be ruined; neither would accumulators stand such rough usage. The screw besides would work at immense disadvantage in a surf. Compressed air, or liquid carbonic acid worked on the reaction principle, might perhaps be made to answer, but we believe that nothing practical has yet come forward, in this line. For

launching, the surf-boat is brought down to the water on its carriage. The carriage is backed in as far as possible, the crew take their seats, and when the right moment arrives, at the word of command, the carriage is jerked out and the boat is shot, bow on, into the water. Human muscle and human will and human courage and human skill will now be tested to their utmost; and the records are there to show that no valor on the field of battle has ever surpassed that of the brave life-savers of our coasts. During these twenty-two years not one of them has ever shown the white feather.

But there are storms on our coast in which neither surf-boat nor life-boat could live for five minutes. He who is in command of the station holds in his hand the lives of his crew, and he must not lose them in a vain attempt to achieve the impossible. They are trained to deeds of courage and of daring, but not of foolhardiness. When therefore boats would be clearly useless, other means must be tried. The chief of these and the one on which all the others depend for their use, is the life-line. The gun used for throwing the line was invented by Captain D. A. Lyle, of the Ordnance Department of the United States Army, and is hence called the Lyle gun. It is of bronze with a smooth $2\frac{1}{2}$ -inch bore, weighs, with its carriage 185 pounds, and carries a 17-pound shot. This shot is a solid cylinder $14\frac{1}{2}$ inches in length, into the base of which is screwed an eye-bolt for receiving the shot-line, the bolt projecting sufficiently beyond the muzzle of the gun to protect the line from being burned off in firing. When the gun is fired the weight of the line causes the shot to reverse. The shot lines used are of three sizes, being $\frac{4}{8}$, $\frac{7}{8}$, and $\frac{9}{8}$ of an inch in diameter. They are called No. 4, No. 7, and No. 9, the largest being thus about as thick as a lead pencil. The maximum charge of powder is 6 ounces, with which charge and a No. 4 line, under favorable circumstances, a range of 695 yards has been attained. With a larger line the range is of course shorter. The No. 4 is used only where the vessel is beyond the range of the heavier lines, because it is not strong enough to haul what is called the whip line on board, and an intermediate one must be supplied, and this is a waste of time and labor, when time and labor are both precious. There is another gun and even a rocket with a slightly greater range, but for reliability, ease in handling and moderate cost, the Lyle gun is preferred by the service. Usually the shot goes over the vessel; sometimes however, it falls short, and then a second is sent, but what seems strange is that there is no known instance in which the shot ever struck or injured anybody on board.

The shot-line having been found by those on board, is to be hauled in till it brings a whip-line on board. A whip-line is an endless rope rove through a block, and when this block comes aboard it is to be fastened to the mast by its tail-piece; the shot-line is then cast off. Another block through which the same endless rope passes is already fixed on the shore, and this establishes a communication between ship and shore by an endless rope passing through two pulley-blocks, one at each end. By means of this rope (which as we have said is called a whip-

line), a hawser, one inch thick, is hauled out to the ship where it is to be made fast a short distance above the whip-line. On this hawser is a traveling pulley, a veritable trolley, which is hauled back and forth by the whip-line. From this trolley is hung the breeches-buoy.

The breeches-buoy is indeed a pair of breeches, very short in the legs, but very roomy, and very strong. Into the buoy steps one of the passengers, and he is immediately hauled in by the crew on shore. And in like manner the others follow. The breeches will even carry two at a time, each one making use of but one of the legs of the apparatus. When however, the ship is plunging much so that the hawser cannot be held taut, then, with the alternate slacking and tightening, the buoy is dropped into the water and next shot up as from a catapult; no mortal could stand such treatment long, and so other means must be taken. Again, when the masts are gone and the hawser must be made fast to the gunwale, and when at the same time the shore is low, the buoy would drag in the water all the way, and the passenger would probably be drowned anyhow. Here the buoy fails again. It will likewise fail, and for the same reason, if the distance between ship and shore be too great. It will also fail if the number of persons to be rescued be large, and there is need of great haste, as when the vessel is rapidly breaking up. In these, and in some other circumstances, the life-car is called into play.

The life-car is a covered boat made of galvanized iron and furnished with a ring at each end in which the hauling-lines may be made fast. By this means it is hauled back and forth on the water without even using the hawser. The cover of the boat is convex, and is provided with a hatch which fastens either inside or outside, through which entrance and exit are effected. It is capable of holding six or seven persons, and with strong and willing hands on shore it can be made to voyage back and forth at a good speed. On the occasion of its first use it saved two hundred and one persons who were otherwise doomed. Where the shore is abrupt, and there would consequently be difficulty in landing from the water, the life-car is swung to the hawser, just as the breeches-buoy, and travels clear of the water through the whole distance.

The heaving-stick is simply a short stick loaded at one end so that it may be steady in its flight, and carrying a fine line, just as the gun-projectile does. It is thrown from the hand, and is, of course, useful only at short range, but still will reach much further than an ordinary coil of heaving-line.

The Coston signal is a bright-red light which burns for a short time, and is used by the beach patrol to warn vessels off dangerous points, or in case they are already aground, to assure them that assistance will come. The remaining articles in list given above hardly require a description.

Many of the stations are connected by telephone with one another, and with the neighboring villages, and these connections are being gradually extended throughout the whole service.

Up to this time we have treated mainly of the merely material part of

our subject. It is time now to say something about the organization and the results achieved.

The Life-Saving Service is attached to the Treasury Department of the government because that department has charge of all matters concerning commerce and the collection of the revenue, and to both of these the Life-Saving Service is closely related. The Secretary of the Treasury is therefore its official head; but all appropriations must of course come through Congress.

The acting head, however, is the General Superintendent, who is appointed by the President and confirmed by the Senate. His term of office is not limited by any law, and is therefore subject only to the good will of the President. His qualifications must be such as are demanded by his office; these, among others, are a thorough knowledge of all the means used in the service for the saving of life and property from shipwreck, coupled with large experience and sound administrative ability. No mere political figure-head would suffice there, and perhaps this is the reason why his salary is so low, being only \$4000 a year. Why, the Sergeant-at-Arms in the Senate receives more than that. An Assistant General Superintendent, appointed by the Secretary of the Treasury, aids his chief in the discharge of his duties, and, in his absence, takes his place. His salary is \$2500. The office of the General Superintendent is in Washington, where, to assist in the transaction of business, a corps of clerks, a civil engineer, a topographer, a hydrographer and a draughtsman are employed. There is, besides, a "Board on Life-Saving Appliances," whose duty it is to examine and report on all inventions and devices that are intended to meet some want in the service.

The next in rank to the General Superintendent is the Inspector, an officer detailed from the Revenue-Cutter Service. His headquarters are in New York City. His business is to inspect about everything connected with the service—stations, men, materials, work, apparatus and their construction, contracts, the drill and efficiency of the crews, etc. He has an assistant to aid him in his work and to take his place in case of his absence.

For each district there is an Assistant Inspector, subordinate to the General Inspector, and who performs in his own district the duties enumerated above, and such others as may be required of him by his superior officers. In case of shipwreck, attended with loss of life, the law requires a strict examination, and it is customary to detail a district inspector for this purpose. He must carefully investigate all the circumstances connected with the disaster, with a view of ascertaining whether the officers or employees of the service can be accused of neglect, errors of judgment, or misconduct in the matter. The details of such investigations are published in the annual reports of the service. The Inspector and Assistant Inspectors receive their regular pay as members of the Revenue Service, but nothing more.

Each district is under the immediate charge of a district superintendent. At the time of his appointment he must not be under 25 nor over 55 years of age. He must know English fairly and be able to keep ac-

counts; be familiar with all the coast of his district and understand the management of all life-saving appliances used therein. He is the disbursing officer for all supplies, and paymaster of all the employees under his charge. He conducts all the business of his district in all matters relating to money and materials, and is, moreover, an inspector *ex officio* of customs. He is under bonds to the amount of from \$10,000 to \$50,000, and receives a salary of from \$1000 to \$1800 per annum.

Each station is in the care of a keeper, who has immediate control of all its affairs. His post is one of the most important in the service, for it is under his leadership that the real work, the saving of lives, is to be accomplished. He must be able-bodied, physically sound, a master of boat-craft and surfing, and have sufficient education to transact the station business. He is nominated by the district superintendent, but the nomination must be confirmed by the district inspector and approved by the General Superintendent. As political influence must, according to law, be severely kept out of the service, it is very rare to find any disagreement in regard to the choice of keeper or other employees.

Keepers reside constantly at their stations, and everything belonging to their stations is in their care, and they are always held responsible for all station property. They are the captains of their crews, and direct them in all their endeavors and share equally with them in all dangers and perils. On their courage, coolness, and judgment depend the lives both of shipwrecked persons and of their own crews. By law they are the guardians of all wrecked property until it is turned over to its rightful owners or to their own superior officers. They are required to keep a daily journal, or log, in which everything which takes place at their stations is recorded, transcripts of which are sent every week to the general superintendent. Immediately after the occurrence of a wreck, the keepers send a detailed account of the disaster, and to jog their memories a list of sixty-six printed questions must be answered one by one. They drill their crews every week, for a specified time, in the use of all the appliances under their control, and are responsible to the district inspectors for the efficiency of the drill and the general good conduct of their men. The maximum salary (paid only to a few keepers for some exceptional reason) is \$800; the ordinary salary is \$700, but keepers of houses of refuge receive only \$400 a year.

The crews employed at the stations are called "surfmén." Their number, at a given station, depends on the number of oars required to pull the largest boat belonging to it. Every station has at least one six-oared boat, and the self-righting life-boats require eight oars, so that the number of men is from six to eight. The selection of surfmen is left to the keepers under certain wise restrictions. This plan has been found the best, because experience has taught that it begets mutual confidence between the leader and his followers, without which strict discipline in hazardous enterprises could hardly be maintained. The restrictions are that the men must be chosen on account of their fitness for the work, and not through any political or family influence. Hence, a keeper is forbidden to take into his crew his father, brother, or son unless it would

be clearly for the greater good of the service to do so. And of this the general superintendent is judge in last resort. Adherence to these rules, or rather laws, has filled the stations with the very pick of the hardy race of beachmen who dwell along our shores. Surfmen receive \$50 a month during the "active season," and \$3 for each occasion of serving at other times. The crews of stations are not entitled to salvage for saving or assisting to save property from wrecked vessels. They may receive rewards offered *voluntarily*, but are strictly forbidden to solicit such rewards.

Compensation equal to one's regular salary is granted for one year (in some cases for two years) to a keeper or surfman who has been disabled by any injury received, or disease contracted, in the line of his duty; and in case of death from the same causes this compensation goes to his widow and children under sixteen years of age.

We have incidentally mentioned above the "active season." This means the portion of the year during which the crews reside at their stations. It differs for different localities, according to their different conditions, climatic and otherwise. Thus, the "active season" for the Atlantic and Gulf coasts is from September 1st to May 1st, it being considered unnecessary to man the stations during the remaining four months, which are the mildest and fairest of the year. In our humble opinion this judgment is not entirely correct, at least for certain portions of this coast, for in this very year a number of disastrous wrecks have been reported since May 1st.

On the Pacific coast six stations are closed from May 1st to September 1st; the remaining four are in active operation the year round, as is also the station at Louisville.

On the Lake coasts the "active season" extends from the opening of navigation, about April 1st, to the ice season, about December 1st. Of course there would be no use in keeping the station open during the "frozen season" on the Lakes, but we believe that the closing of the stations during one-third of the year at other places, and the meagre pay of surfmen, keepers, and officers generally, constitute the weak points of an otherwise sound system. Even if it be the finest season of the year, it is not easy for men to find employment for just four months, for, be it understood, the surfman must be on hand on September 1st and make a written promise to remain till April 1st, and must fulfil that promise under pain of forfeiture of his wages. Let us take one example. On that 40-mile stretch of Cape Cod there are ten stations. The seventy-one surfmen employed at these stations must, according to law, be engaged from "the immediate vicinity." Now, about the only business they have been employed in from childhood up is fishing, but, if we have been rightly informed, the "active season" for fishing is not May and June, but considerably later. During these four months, then, the surfman will frequently, if not generally, be leading a shiftless life, with little or no means of providing for his wife and family. It is time this system were changed. Let the poor surfmen be employed the year round, and their wages, as well as the wages of the keepers, be raised,

and if the United States Government is too poor to do this let it sell out to somebody else that will be able to manage its funds better.

This is the general feeling among those who have watched the workings of the system, and the general superintendent himself has not failed, on several occasions, to call the attention of the government to the subject.

"While the record of the year (1889-1890) shows the maintenance of the high standard of efficiency in the saving of life and property that has in years past distinguished the service, it must be said that it is doubtful whether this condition of affairs will continue to exist in view of the growing dissatisfaction with the rates of pay now allowed by law which is daily becoming more manifest among the crews. Considerable embarrassment has been caused by the resignation of some of the oldest and best keepers and surfmen, who, unable in many instances to provide adequately for the support of their families, are leaving the service to accept more lucrative employment elsewhere. Especial difficulty in this regard has been experienced on the great lakes, where more than 30 per cent. of the force have left the stations on this account, whose places it has been well-nigh impossible to fill with other than inexperienced, and, in this respect, inferior men. A continuance of this situation must in the end result disastrously."

There are many other points of interest connected with the service, but space is failing us so fast that of what remains we can give only the most important, and even those only very succinctly.

The total cost, a matter of very great interest for the maintenance of the service, during the fiscal year ending June 30, 1890, appears to have been about \$915,000, distributed, in round numbers, as follows:

Salaries of officers and employees at headquarters,	\$37,000
Salaries of district superintendents,	21,000
Salaries of station keepers,	152,000
Salaries of surfmen,	576,000
Pay of disabled keepers and families of dead ones,	2,500
Traveling expenses of officers on special detail,	8,000
Supplies, repairs etc.,	118,500
	<hr/>
	\$915,000

Finally, with all this machinery at work, what have been the results: To save space and to render it more easy to examine and compare them, we put them in tabular form:

Disasters to documented vessels,	384
Disasters to small craft, yachts, boats, etc,	145
	<hr/>
	529
Of this number there was totally lost,	76
Warned off by patrol signals when in imminent danger,	227
Value <i>involved</i> (vessels and cargoes):	
Documented vessels,	\$7,555,908
Small craft,	61,527
	<hr/>
Total value involved,	\$7,617,435

Value *saved*:

Documented vessels,	\$5,451,843
Small craft,	59,102
Total value saved,	<u>\$5,510,945</u>

Value *lost*:

Documented vessels,	\$2,104,065
Small craft,	2,425
Total value lost,	<u>\$2,106,490</u>

Persons *involved*:

Documented vessels,	3197
Small craft,	299
Total persons involved,	<u>3496</u>

Persons *saved*:

Documented vessels,	3159
Small craft,	289
Total persons saved,	<u>3448</u>

Persons *lost*:

Documented vessels,	38
Small craft,	10
Total persons lost,	<u>48</u>

Persons saved after falling from wharves, piers, etc., and when

bathing,	27
Persons succored at stations,	788
Number of days of succor afforded (aggregate),	1881

We see therefore that by an expenditure of \$915,000, property to the value of \$5,510,945 has been rescued from loss, which means a profit of more than 600 per cent. per annum on the investment. More yet; for, if we reckon in the 227 vessels warned out of danger, and so totally saved, and if we estimate their average value as equal to that of the others (and why should we not?) the profit will rise to about 1000 per cent. Is it, or is it not, worth while for the government to save yearly to the commerce of the country more than nine millions of dollars net? The answer cannot be doubtful. But all *that* is only incidental and of secondary importance.

The well-defined, and well-understood, and well-fulfilled duty of the Life Saving Service is the saving of human lives. Now, we have seen that out of 3523 (*i.e.*, 3496 + 27) persons on the point of being lost, the service has saved 3475 (*i.e.*, 3448 + 27), which is very nearly 98½ per cent., while the number lost was scarcely over 1½ per cent. Suppose that each person saved were spared to live ten years longer (a ridiculously low estimate), the number of years of human life saved to the country would be 35,230, of which each member of the service should be credited with about 140 years annually.

"Tis grand; 'tis more than grand; 'tis glorious."

T. J. A. FREEMAN, S.J.

Book Notices.

CARMINA MARIANA. An English Anthology in Verse in Honor of or in Relation to the Blessed Virgin Mary. Collected and arranged by *Orbz Shipley, M.A.*, editor of "Annus Sanctus; Hymns of the Church for the Ecclesiastical Year." London: Printed for the Editor by Spottiswoode & Co. 1893.

Frederick Stokes, in his brilliant introduction to Maitland's *Dark Ages*, states rather strongly a fact whose general truth has been the subject of much animadversion by the intelligent and educated Catholic body, lay and clerical. He says: "It is hardly too much to say that modern literature as a whole is Protestant. For whatever reason a species of intellectual sterility seems to have fallen upon Roman Catholics within the last two hundred years." But he explains this apparent lack of creative power by the "series of hurricanes" which for centuries past "have swept upon the Latin Church." Nevertheless, it must be a matter of congratulation that in this "season of calm weather" (as Wordsworth puts it),—that is *relatively* calm—the intellectual power erst given to polemic battles, now exerts itself to great effect and with a visible insistence of increasing force and *prestige* in the quieter emulation of religious *belles-lettres*. Our current literature, whether taking the form of review or magazine, is winning not recognition merely but sincerest praise, even from those who are not of the "household of the faith." While this is true and indisputable, still must the candid Catholic heart confess to remissness in one large field of modern literary research—that of Hymnology. What shall explain our so constant and so complete indifference to the exhaustless hymnodal wealth of the Church? Our separated brethren have found therein not merely a source of literary fame, but, better still, a fount of religious emotion, and the blessed calm—momentary, perhaps, but intensely sweet—of spiritual restfulness. Perhaps our very familiarity with that sweetness has dulled the edge of appreciation, or the embarrassment of hymnodal wealth has baffled us. Whatever the cause may have been, it is that converts from Protestantism are almost the only eminent expounders, translators and editors of our great hymnologic treasures, of whom the Catholic body can boast. Crashaw, Dryden, Austin, Caswall, Newman, Shipley are the familiar names that rise immediately to the lips! And while better work has been done in the composition of new hymns, than in the editing of the older ones by Catholics, still even here the names of two converts hold an enviable place—Adelaide Proctor and the many-songed Father Faber.

And so it happens, that, in this age of "lyrics," hymnals, collections we have waited long for a worthy tribute of song to Our Lady, but, happily, our long waiting has been answered at last. The "Carmina Mariana" is a most delightful surprise. It is hardly too much to say that it is an ideal collection of odes, lyrics, poetic meditations, etc., having Our Lady as the theme of inspiration. In the wide fields of Christian song the flowers which have shed the sweetness of devotion to Mary are not only of perennial bloom but of endless variety and richest profusion, and he who would gather even many and many a

nosegay must feel that he has left much beauty still wasting "its sweetness on the desert air." The task of selection must be a labor of love, of piety, and of artistic appreciation. Very fortunately for the devout clients of *Our Queen*, the present anthology has been just such a labor of love, piety and art. It is such a volume as we might have expected from an editor of Mr. Shipley's well-proved fitness for the task of editing a worthy Marian collection of verse. The title page informs the casual reader of something of this fitness, for the "*Annus Sanctus*" is a work of enduring merit, and is the result of much critical research. But Mr. Shipley has been identified most prominently, both before and after his conversion to the Catholic faith, with hymnologic labors. His three *Zyrras* (*Eucharistica*, *Messianica*, and *Mystica*), published nearly thirty years ago, while he was yet an Anglican clergyman, speak of a long familiarity with at once the drudgery of hymnologic editorship and the fine, critical taste of the accomplished scholar and the pious literary pursuits of a devout heart.

It has been the aim of the editor, as he tells us :

"I. To exhibit, within the compass of a single volume, a considerable body of English verse written in the past, in connection with the name of Mary ; and,

"II. To present translations from foreign languages, of poetry concerning *Our Blessed Lady*, either of classical reputation in itself or representative of a numerous class, or which bears the special 'imprimatur' of the Church."

"The materials which have been employed to these ends may be specified more in detail as follows :

"1. Selections of moderate length from the works, original or translated, of the greater English poets, in which reverence for, or devotion to, Mary is united with high poetic achievement.

"2. Shorter poems, mostly lyrical, many of which have been contributed by writers—English, Irish and American—of the present and past generation.

"3. Examples or paraphrases from early English sources verbally modernized or printed in modern spelling, although, in a few instances, the old spelling has been retained.

"4. Translations, old and new, mostly of marked devotional character, from foreign tongues—hymns from the Syriac and Armenian, odes from the Greek, sequences from the Latin, "*laude*" from the Italian, and sonnets from the Spanish and Portuguese, together with gleanings from other languages. And here have been included certain poems of very ancient date, little known, but of exceptional value, as offering early testimony to the veneration of the Mother of God.

"5. Quotations of, or from, legendary poetry, ballads, carols, elegies, dramatic scenes, passion-plays and Laments of *Our Lady*, cradle-songs and lullabies, descriptions of celebrated pictures, together with songs, hymns and prayers in metre, not meant for public use.

"6. Short pieces of poetry from many sources, extracts and fragments, prologues and dedications, and the like—some from authors whose works do not afford suitable passages for longer quotation."

Mr. Shipley has done his work well. From Chaucer to Tennyson, the magnificent roll of poets has been searched for appropriate treasures. The Egyptian has been spoiled of—or, better, has yielded in generous abundance—religious gems of great value. The tributes to *Our Lady* found in Wordsworth and Scott are of common knowledge ; but we should scarce expect to find so many honored names of Protestant poets in a collection of Catholic verse as we find in "*Carmina Mari-*

ana." The lesson is an instructive and beautiful one. We can almost sympathize with the children of a chilling Protestant tradition, who, drawn now by the overwhelming attractiveness of Mary's beauty, dignity and prerogatives, and hampered again by the old anti-"Marolatry," imbibed as a spiritual pabulum with their mothers' milk, have, nevertheless, enshrined Mary in some of their best and tenderest verse. George Herbert—whose "Anagram," by the way, we miss in this collection—puts this conflict pretty clearly in his poem "To All Angels and Saints:"

"I would addresse
My vows to thee most gladly, blessed Maid,
And Mother of my God, in my distresse:
Thou art the holy mine, whence came the gold,
The just restorative for all decay
In young and old;
Thou art the cabinet where the jewel lay:
Chiefly to thee would I my soul unfold,
But now, alas! I dare not."

Alas! and again alas! he does not seek the aid of her prayers whose mere hint to Her Divine Son caused Him to work His first miracle, even before His time had come for manifesting His power to the world! And there are many like tender-rhythmed Herbert, who *would*, but dare (!) not.

If we should begin to quote from the "Carmina"—and the itching is strong thereunto—we should find ourselves rehearsing the volume! For in simple truth, we have never seen such an artistic and devotional repertory of Catholic verse. Nearly all ages and climes and schools and varieties of rhythm and poetic form have found elegant representation. The fine literary gift and critical study of the compiler are evidenced not alone by the selection of poetry, but as well in the judicious notes appended to some of the hymns. He has been at great pains, too, to present an authentic and reliable copy of variant poems; his proof-reading is perfect, and the typography exceedingly attractive. The whole volume is a triumph of the printer's art. Even in its material aspect we prefer "Carmina Mariana" to Schaff's elegant anthology, "Christ in Song," or Henry Fish's large volume, "Heaven in Song."

In conclusion, the present reviewer ventures to intrude a personal predilection suggested by his theme. In the midst of so many names of Celtic bards who have sung the praises of Mary, he desiderates that of the tender, devout, but ill-starred Mangan; a few stanzas from his fine translation from the German, "Mary, Queen of Mercy," would serve art no less than piety, and would enshrine in many a heart the "dream-encircled" mystic whom cultured Irishmen, by a consensus of opinion, place on the very pinnacle of Ireland's "House of (poetic) Fame."

THE PRINCIPAL WORKS OF ST. JEROME: translated by the Hon. W. H. Freeman-tle, M.A., Canon of Canterbury Cathedral and Fellow of Balliol College, Oxford. New York: The Christian Literature Company. 1893.

This forms the sixth volume of the "Select Library of Nicene and Post-Nicene Fathers," edited by Drs. Schaff and Wace, and for many reasons may be pronounced the most valuable member of the series.

When we consider the sturdy individuality of the *Doctor Maximus*, his superiority in erudition over the other Fathers of the Church, and the weight and permanence of the influence which he has exercised upon the Christian world, it is quite startling to be reminded that this is "the first translation of Jerome into English"; and this notwithstanding

ing the fact that, with the exception of St. Augustine, no Father has been so frequently quoted from and appealed to by preachers and writers, and that his crisp, vigorous sentences are ever ringing in our ears as the most forceful enunciations of distinctively Catholic truths.

For if ever there existed a typical "Romanist" in the strictest acceptance of the term,—a loyal servant of the Pope, a monk bound by irrevocable vows to chastity, vigils and fastings, and glorying in his spiritual chains; a priest with lofty notions as to the dignity and powers of the Christian priesthood; a staunch believer in the reality and frequency of contemporary miracles; a fond reverer of relics and holy places; an enthusiastic eulogist of the superiority of virginity and a chivalrous defender of the honor of Mary,—surely that man's name was Eusebius Hieronymus Stridonensis. "He ranks," says Canon Freemantle, "as one of the four Doctors of the Latin Church, and his influence was the most lasting; for, though he was not a great original thinker like Augustine, nor a champion like Ambrose, nor an organizer and spreader of Christianity like Gregory, his influence outlasted theirs. Their influence in the middle ages was confined to a comparatively small circle; but the monastic institutions which he introduced, the value for relics and sacred places which he defended, the deference which he showed for Episcopal authority, especially that of the Roman Pontiff, were the chief features of the Christian system for a thousand years; his Vulgate was the Bible of Western Christendom till the Reformation."

There is, to be sure, a great deal of rhetorical exaggeration in this estimate of the four great Fathers; but this is easily pardoned in one who has for many years been so admiring a student of Jerome as the Canon of Canterbury. St. Augustine and St. Gregory were both of them monks, and would have continued to be monks until death, had they not been dragged from their cells to fill Episcopal thrones; and they and St. Ambrose valued relics and sacred places as highly, and sought them as eagerly, and defended them as strenuously as did St. Jerome. The main difference between the three great Bishops and Jerome consists in this, that whilst they were so distracted with public affairs that their asceticism is apt to be lost sight of, Jerome was from first to last a monk and nothing more.

It puzzles us, therefore, to understand what comfort a Protestant can find in turning over the burning pages of old Jerome, every line of which is, in anticipation, an indignant outburst against, and a powerful refutation of, everything which Protestantism holds dear. We have no doubt that, before this, Drs. Schaff and Wace have received many an irate protest against using the press of the "Christian Literature Company" for the propagation of such rank Popery. Open the book anywhere and you will read such intolerable language as the following: "In every act we do, in every step we take, let our hand trace the Lord's cross."¹

"There is no such thing as a Church without Bishops."²

"We ought to remain in that Church which was founded by the Apostles and continues to this day. If ever you hear of any that are called Christians taking their name not from the Lord Jesus Christ, but from some other, for instance, Marcionites, Valentinians, men of the mountain or the plain (add Lutherans, Calvinists, Zwinglians), you may be sure that you have there not the Church of Christ, but the synagogue of Antichrist. For the fact that they took their rise after the foundation of the Church is proof that they are those whose coming the Apos-

¹ P. 39.

² P. 331.

tle foretold. And let them not flatter themselves if they think they have scripture authority for their assertions, since the devil himself quoted Scripture, and the essence of the Scriptures is not the letter, but the meaning,"¹

We might go on till we had transcribed the entire volume. That the task of presenting this "first translation of Jerome into English" was uncongenial to a Protestant, is evidenced by the assurances which the translator has taken care to scatter through the book that he does not agree with his author. These uncalled for remarks of the learned Canon, we venture to say, detract largely from the value of an excellent work. The book appeals not to the Protestant but to the Catholic mind, and Catholic directors of consciences will think twice before recommending the book indiscriminately until the translator's irrelevant remarks are expunged; and since it is safe to predict that the volume will never be warmly recommended to the Protestant public, there is danger of its falling between two stools, which were a great pity, for it is an admirable and, so far as we have read, a remarkably faithful translation.

Why does Canon Freemantle persist in asserting that St. Jerome, in his laudation of virginity, has spoken disparagingly of the holy state of matrimony, since the saint has been so careful to forestall any such interpretation of his words? Jerome's doctrine is precisely identical with the doctrine of every Catholic from St. Paul down to the present day, viz., that marriage is good and virginity better. "Some one may say," remarks the saint, "'Do you dare detract from wedlock, which is a state blessed by God?' I do not detract from wedlock when I set virginity before it. No one compares a bad thing with a good. Wedded women may congratulate themselves that they come next to virgins,"² "I beseech my readers," he says again, "not to suppose that in praising virginity I have in the least disparaged marriage, and separated the saints of the Old Testament from those of the New."³

It takes away one's breath to hear a Protestant accusing the Catholic Church of "bringing marriage into disesteem." Disesteem, forsooth! The degradation of modern marriage dates from the unholy unions of apostate monks and nuns and the repudiation of lawful wives by adulterous monarchs in the sixteenth century. Then were Christian people taught for the first time that matrimony is no sacrament, but a mere contract like any other. Then divorce began its baneful reign. And this was bringing marriage back into esteem!

It was the Catholic doctrine, everywhere illustrated by the example of so many noble souls, of the possibility and excellence of virginity, which nerved the Church in her great struggle to crush out divorce. If thousands of Christians voluntarily embraced a celibate life, where was the hardship, she could say, if men or women, forced to live separately from their consorts, were commanded to remain as if unmarried. This consideration is a powerful argument among Catholics to the present day. Let all whom it concerns ponder the terms in which St. Jerome has proclaimed the indissolubility of marriage. "A husband may be an adulterer or a Sodomite; he may be stained with every crime and may be left by his wife because of his sins, yet he is still her husband, and, so long as he lives, she may not marry another."⁴ And the member of a Church which connives at divorce dares to accuse St. Jerome and the Catholics of bringing marriage into disesteem!

But we ought not to be too severe with one who has done a good work and done it exceedingly well. Everything which tends to make

¹ P. 334.² P. 29.³ P. 344.⁴ P. 110.

people better acquainted with the Fathers will accrue to the advantage of Catholicity, their genuine offspring. May this volume have a wide circulation; may it set many to do a great deal of independent thinking; and may the saint intercede in heaven for the learned man who has loved him and studied him, though painfully conscious that he is no member of the Church of Jerome, Augustine, Ambrose, and Gregory.

By the way, how could the Canon commit the egregious blunder¹ of making Chrysostom Bishop of Antioch in 387?

THE MARRIAGE PROCESS IN THE UNITED STATES. By *Rev. S. B. Smith, D.D.* New York, Cincinnati, Chicago: Benziger Brothers. 1893. 8vo., pp. 435.

This is a very valuable and timely work on the important subject of which it treats. Marriage being essentially a contract, though of a very special and sacred kind, and among Christians a Sacrament, to be valid, must fulfill all the conditions required for a valid contract. The consent of both the contracting parties must be free and deliberate; it must be expressed in the way required or permitted by the Church; and the parties themselves must be such as are capable of entering into such a relation. Now, according to the laws of the Church, various classes of persons are not thus free or capable. There are, as is well known, fifteen or more annulling impediments, such as a prior existing marriage, solemn vows, sacred orders, relationship by blood or marriage within certain degrees, certain kinds of crime, insanity, want of age, force and fear, etc., any one of which, if it existed at the time of the marriage, would render it null and void from the beginning. The existence of such an obstacle ought to be and as a rule is sufficiently inquired into before marriage, but sometimes it will happen that it is discovered only after the ceremony has taken place and then either a dispensation has to be procured, if possible, and the marriage rehabilitated, or the parties must be separated and a declaration of annulment pronounced by the proper authorities. Exact information on these matters will be found amply, yet succinctly, given in the work before us.

Until recently in this country the Church authorities as a rule investigated and decided questions relating to this subject informally and extra-judicially, usually as cases of conscience in connection with the Sacrament of Penance, when of necessity the facts were stated only as they were known, or appeared, to one of the parties. Such decisions, while sufficient to guide the consciences of persons acting in good faith, must have been at times at variance with the true facts of the case, or with the law bearing on it, and so prejudicial to the rights of other parties and to the rights and dignity of the Sacrament of matrimony itself. Accordingly in 1883 Propaganda issued an "Instruction" requiring the general law of the Church in regard to cases of this kind to be observed in this country also and that whenever the validity of a marriage already contracted should be called in question, sentence should be given only after a regular judicial process or trial had been held according to certain rules and directions which it gives in detail. This "Instruction" prescribed the mode of constituting the court, the method of conducting the examination of parties and witnesses, of keeping the records, giving sentence, making appeals, etc. The "Marriage Process" has thus become obligatory in every diocese of this country when a case of the kind referred to arises and we have no doubt that all whose duties oblige them to take any part in it, and others also will gladly welcome

¹ P. 13.

Dr. Smith's learned and exhaustive work on the subject. They will find in it not only a complete and accurate exposition of the "Marriage Process" proper, but a useful and reliable embodiment of the conclusions of the best and latest writers on the general subject of which it forms a part.

We have noticed but a very few points, and those of minor importance, in which we think the author either inexact or mistaken.

On the question of the competency of the bishop of the diocese where a marriage was celebrated, but in which the parties do not reside at the time the action for annulment is instituted we do not think that those who hold the affirmative generally limit it to the case in which the defendant happens to be found in the diocese at the time the action is commenced. Gasparri, indeed, says so, and refers to a decision of S. C. C., *Neopolitana seu Romana Matrimonii*, etc., January 30, 1858, the text of which we have been unable to see; but two centuries ago no such limitation seems to have been thought of, as appears from Lacroix, lit. vi., par. iii., n. 430, where we read as follows: "Si conjux unus agat contra alterum ad dissolutionem matrimonij, aliqui voluerunt judicem competentem esse solum episcopum loci in quo contractum est matrimonium, 1. quia per contractum in aliquo loco celebratum sortitur quis forum. 2. Quia es E contra Krimerus, n. 1660, probabilius dicit judicem hic competentem esse etiam episcopum domicilii, hujus enim jurisdictioni etiam subjacet, et nihil novi est quid quis habeat in pluribus locis forum. Hinc resp. ad 1. non ides excludi episcopum etiam domicilii, si apud hunc conveniatur."

We think the difficulty has arisen from forgetting the distinction in Roman law between the terms *conveniri* and *defendi*; a person could not be said to be *consentas*, unless he were personally present, but he might be a *defendant* and obliged to make answer in certain cases through a procurator, attorney, etc, even when absent. This is borne out also by *cap. Romana, de for. comp. in § 6 Contrahenter*, and by its gloss., of which the first part only, that which treats of *convenientia* in its technical legal sense is quoted by Perhing and after him by Gasparri.

The author, after stating, p. 180, that the bishop "is free to sit personally in court in matrimonial causes, or to appoint others to do so in his stead," goes on to say that "he is also at liberty to give these delegated judges power to hear and pronounce final sentence upon the cause, or only to hear or try it; and to reserve to himself the final decision or sentence." This is true; but in the latter case, they cannot be called delegated *judges*, but auditors merely. The duty of an auditor is to hear and report, while the office of a judge, whether ordinary or delegated, always includes the pronouncing of sentence. It is needless to quote authorities on a point so obvious.

The Council of Baltimore (Third Plenary) on this matter seemed to prefer rather the "Instructio Austriacæ" drawn up by the late Archbishop of Vienna to suit the peculiar circumstances of the Austrian Empire; the Austrian instruction, however, differs essentially from that of Propaganda in many particulars, and was never officially approved at Rome, as appears from the significant correction by Propaganda of the words "*Romae probatam*" applied to it by the Council of Baltimore into "a gravibus theologis et canonistis Romanis, licet solo privato sur judicio, commendator," as they stand at present.

We may here mention the following point upon which we have heard some differences of opinion, but which has not been touched on by any writer that we have seen, and might in some cases cause some embarrassment: In case the courts both of first and second instance decide against

the validity of a marriage and the defendant spouse acquiesces, but the *defensor vinculi* of the first court is not satisfied, can he appeal from the sentence of the court? Our own opinion is that he cannot; we think that any further appeal in such a case is left entirely to the conscience and discretion of the *defensor vinculi* of the second court. We should be pleased, however, to see the point decided by some other authority.

We need not say that Dr. Smith has brought his work up to date, but we may call attention to the recent decree of the Holy Office (June 3, 1889), found on page 352 of the present volume, which does away with the necessity of an appeal by the *defensor vinculi* from a decision of a court of first instance in certain cases in which the invalidity of the marriage is "clearly evident and certain."

THE CATHOLIC PRIESTHOOD. By *Rev. Michael Müller, C.S.S.R.* Benziger Bros. New York, Cincinnati and Chicago. 2 vols.

This is a new edition of Father Müller's valuable work on the Catholic priesthood first issued in 1885. The work is in two volumes, each volume divided in two parts. Part I. treats of the great dignity of the priesthood and on the vocation necessary for it. Part II. is devoted to the private life of the priest. Part III. speaks of the public life of the priest. Part IV. describes what may be called the mixed life of the priest. The judgment we formed of the work when it was first published has gained strength with every new reading of the same. Intensely practical, devout, elevating, full of consolation, at once learned and pious, these volumes should be in the library of every priest, not simply for spiritual reading, but for meditation and serious study. Of the many works of Father Müller, these easily take the first rank. They are a compendium of pastoral theology. There is nothing in a priest's daily life, whether private or public, which has been neglected. The learned author shows how extensive has been his reading and how admirably he has digested the vast materials at his disposal. The language is plain, sincere, even severe at times, but always full of charity. We are sure that those of the clergy who have not read the work will thank us for calling their special attention to its value, and, having read it once, will often take it up again to study its pages. The author speaks of it in his preface as the result of "my labors of thirty-two years, as an offering which I make (to my brethren of the clergy) to show the deep reverence and love which I have always entertained for their exalted dignity; for it is fitting, says St. Thomas, that an offering of the fruits of our labors should be made to priests, and thereby contribute towards filling the ranks of the clergy with more and more worthy and capable men." It is an admirable work for the clergy, and should be used in every seminary for the instruction, especially, of the theologians.

ELOCUTION AS AN ART; ITS PRECEPTS AND EXERCISES. Arranged for Colleges and Academies. By a Member of the Dominican Order. New Orleans Dominican Academy, St. Charles Avenue. 1893. pp. viii.-216.

This is a slender volume, but its merits are far beyond its size. The instructions are practical. The chapter on articulation is especially valuable. Every letter and every syllable has its peculiar sounds brought out. Noteworthy is the number of exercises upon the most difficult combinations of sounds that our guttural, spluttering language could produce. This chapter is alone sufficient reason for adopting the book. The boy or girl who has been drilled in its exercises will find little dif-

faculty in reading and speaking with that distinctness of utterance, and that measured tone, which bespeak the cultured person. The chapter on vocal defects—stammering, lisping, stuttering, and the like—supplements that on articulation, and is no less important. The exercises are admirable. The selections are made with good taste, and the explanations and accentuations accompanying them are real helps towards grasping their meaning. See, for instance, the remarks introducing what the gifted author calls “Tennyson’s glorious dithyrambic” (p. 156), the “Charge of the Light Brigade.”

The Dominican nun who has written this book, and has tested its rules with her class during many years before publishing them, is to be congratulated upon having produced one of the most useful and practical manuals of elocution that we are acquainted with. Why not place upon the book the imprint of a regular publisher, so that it may reach a larger audience?

DIE VEREINIGTEN STAATEN NORD-AMERIKAS IN DER GEGENWART. Von *Claudio Jannet* und *Dr. Walter Kaempe*. Freiburg and St. Louis: B. Herder. 1893. Price, \$3.

It is sometimes of great advantage, and sometimes of very little, “to see ourselves as others see us.” The latter is generally the case when “scientific” foreigners undertake to draw a picture of the institutions and customs of a great nation. Jannet was unfortunate in the epoch (1873–1877) when the spirit moved him to embark upon the task of describing life in the United States. Opinions in France at that period were, in Catholic circles, highly undemocratic, and it looks as if he had proposed to himself to demonstrate to his countrymen that popular sovereignty was a fraud and a failure. On this side of the Atlantic, radicalism, carpet-bagging, and bankruptcy were the chief topics of the hour. Hence, his portrait is amusing as a caricature, but of little or no “scientific” value. We fail to see all the excellencies which the German translator has discovered in the book, or why Jannet, instead of Bryce, was chosen to give visitors to the Columbian Exposition from the Fatherland a preliminary idea of the sort of country they were about to travel in. Whether democracy be desirable or not in Germany or France, is a question which concerns us remotely; it works extremely well in America, and the nation is in no discernible danger.

LITERARY, SCIENTIFIC AND POLITICAL VIEWS OF ORESTES A. BROWNSON. Selected from his Works by Henry F. Brownson. New York, Cincinnati and Chicago: Benziger Brothers. 1893.

In publishing this volume Dr. Brownson has done a service to the cause alike of religion and of American literature second only to that which he has already rendered in publishing the complete works of his illustrious father, Dr. Orestes A. Brownson. He has thus brought Dr. Orestes A. Brownson’s most valuable thoughts on subjects of vital importance within the reach of readers who are deterred by their cost and size from purchasing and reading the twenty volumes which the complete edition of Brownson’s works comprises.

SAINT THOMAS OF CANTERBURY AND SAINT ELIZABETH OF HUNGARY: Historical dramas. By *Clement William Barraud, S. J.* London and New York: Longmans, Green & Co.

This book has reached us just as the last form of the *QUARTERLY* was being made ready for the press. We have, therefore, only room and

time to say that, from a cursory perusal of the work, we are of the opinion that it portrays St. Thomas of Canterbury and St. Elizabeth of Hungary and the times in which they lived, more faithfully and successfully than do most of the other dramas which have these two great and glorious saints as their chief personages.

BOOKS RECEIVED.

[Some of the books mentioned under this head were received too late for careful examination; notices were prepared of a number of others, but have been omitted, owing to lack of space to insert them. The mention of their titles here does not preclude further notice of them in a subsequent number of the REVIEW.]

THE POSITION OF THE CATHOLIC CHURCH IN ENGLAND AND WALES DURING THE LAST TWO CENTURIES. Retrospect and Forecast. Edited by the XV. Club. With a Preface by the Lord Braye, President of the Club. London: Burns & Oates. New York: Catholic Publication Society Company.

THE BLESSED SACRAMENT, AND THE CHURCH OF ST. MARTIN AT LIÈGE. By *Dean Cruls*. Translated by permission of Monseigneur Doutreloux, Bishop of Liège. By William S. Preston. New York: The Catholic Publication Society Company. London: Burns & Oates.

HISTORICAL SKETCH OF THE AUGUSTINIAN MONASTERY, COLLEGE AND MISSION OF ST. THOMAS OF VILLANOVA, Delaware County, Pa., during the First Half-Century of their Existence. Compiled by *Rev. Thomas C. Middleton, D.D., O.S.A.* Published by Villa Nova College. 1893.

SHORT SERMONS ON THE EPISTLES FOR EVERY SUNDAY IN THE YEAR. By the *Very Rev. N. M. Redmond, V. F.* New York: Fr. Pustet & Co. 1893.

REMINISCENCES OF EDGAR P. WADHAMS, First Bishop of Ogdensburg. By *Rev. C. A. Walkworth*, Author of "The Gentle Sceptic," "Auditorocte, and Other Poems," etc. With a Preface by Right Rev. H. Gabriels, D.D., Bishop of Ogdensburg. New York, Cincinnati and Chicago: Benziger Brothers. 1893.

THE DEVOUT YEAR. By *Richard F. Clarke, S. J.* Short Meditations for Advent, Christmas, March, Lent, Easter, May, The Ascension to Corpus Christi, June, July and November. New York, Cincinnati and Chicago: Benziger Brothers. 1893.

THE CATHOLIC DOCTRINE OF FAITH AND MORALS, gathered from Sacred Scripture, Decrees of Councils, and Approved Catechisms. By *Very Rev. William Byrne, D.D.*, Vicar-General of the Archdiocese of Boston. With the Sanction of His Eminence, the Cardinal, and other Church Authorities. Boston: Cashman, Keating & Co.

FIFTY-TWO SHORT INSTRUCTIONS IN THE PRINCIPAL TRUTHS OF OUR HOLY RELIGION. From the French, by the Rev. Thomas F. Ward, Rector of the Church of St. Charles Borromeo, Brooklyn, N. Y. Cincinnati, New York and Chicago: Benziger Brothers.

TO OUR CONTRIBUTORS.

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THE EDITOR.

